



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

*We make Indiana a cleaner, healthier place to live.*

Frank O'Bannon  
Governor

Lori F. Kaplan  
Commissioner

July 31, 2003

100 North Senate Avenue  
P. O. Box 6015  
Indianapolis, Indiana 46206-6015  
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(800) 451-6027  
[www.IN.gov/idem](http://www.IN.gov/idem)

TO: Interested Parties / Applicant

RE: Rieth-Riley Construction, Co., Inc. F 097-15790-05166

FROM: Paul Dubenetzky  
Chief, Permits Branch  
Office of Air Quality

## Notice of Decision: Approval - Effective Immediately

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 13-15-5-3, this permit is effective immediately, unless a petition for stay of effectiveness is filed and granted according to IC 13-15-6-3, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

If you wish to challenge this decision, IC 4-21.5-3 and IC 13-15-6-1 require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, ISTA Building, 150 W. Market Street, Suite 618, Indianapolis, IN 46204, **within (18) eighteen days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

- (1) the date the document is delivered to the Office of Environmental Adjudication (OEA);
- (2) the date of the postmark on the envelope containing the document, if the document is mailed to OEA by U.S. mail; or
- (3) the date on which the document is deposited with a private carrier, as shown by receipt issued by the carrier, if the document is sent to the OEA by private carrier.

The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision or otherwise entitled to review by law. Please identify the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, date of this notice and all of the following:

- (1) the name and address of the person making the request;
- (2) the interest of the person making the request;
- (3) identification of any persons represented by the person making the request;
- (4) the reasons, with particularity, for the request;
- (5) the issues, with particularity, proposed for consideration at any hearing; and
- (6) identification of the terms and conditions which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178. Callers from within Indiana may call toll-free at 1-800-451-6027, ext. 3-0178.

Enclosure

FNPER.wpd 8/21/02



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**FEDERALLY ENFORCEABLE STATE  
OPERATING PERMIT (FESOP) RENEWAL  
OFFICE OF AIR QUALITY and INDIANAPOLIS OFFICE  
OF ENVIRONMENTAL SERVICES**

**Rieth - Riley Construction Co., Inc.  
Portable**

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-8 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Operation Permit No.: F 097-15790-05166	
Issued by: Original signed by Paul Dubenetzky Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date: July 31, 2003  Expiration Date: July 31, 2008

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## SECTION A

## SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) and Indianapolis Office of Environmental Services. The information describing the source contained in Conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

### A.1 General Information [326 IAC 2-8-3(b)]

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The Permittee owns and operates a portable hot mix drum asphalt manufacturing source.

Authorized individual: Asphalt Plant Specialist  
Source Address: Portable  
Mailing Address: P.O. Box 477, Goshen, Indiana 46527-0477  
General Source Phone: 219 - 875 - 5183  
SIC Code: 2951  
Source Location Status: Attainment for all criteria pollutants  
Source Status: Federally Enforceable State Operating Permit (FESOP)  
Minor Source, under PSD or Emission Offset Rules;  
Minor Source, Section 112 of the Clean Air Act  
Not 1 of 28 Source Categories

### A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-8-3(c)(3)]

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This portable source consists of the following emission units and pollution control devices:

- (a) One (1) hot mix drum mixer, constructed in 1998, equipped with a baghouse for particulate matter control, exhausting through stack SV-1, capacity: 400 tons per hour.
- (b) One (1) dryer burner, constructed in 1998, firing waste oil as a primary fuel and No. 2 distillate oil, No. 4 distillate oil, natural gas, butane gas, and propane as backup fuels, exhausting through stack SV-1, rated at 120 million British thermal units per hour.
- (c) One (1) hot oil heater, constructed in 1998, firing No. 2 fuel oil as a primary fuel with natural gas and propane gas as backup fuels, exhausting through stack SV-2, rated at 2.15 million British thermal units per hour
- (d) Two (2) reciprocating internal combustion engines, constructed in 1998, firing No. 2 fuel oil, exhausting through stacks SV-7 and SV-8, rated at 545 and 50 kilowatts (5.473 and 0.505 million British thermal units per hour), respectively.
- (e) Two (2) liquid asphalt storage tanks, identified as Tank 1 and Tank 2, constructed in 1998, exhausting through stacks SV-3 and SV-4, capacity: 35,000 and 20,000 gallons, respectively.
- (f) One (1) waste oil storage tank for burner fuel, identified as Tank 3, constructed in 1998, exhausting through stack SV-5, capacity: 15,000 gallons.
- (g) One (1) fuel oil storage tank for hot oil heater fuel, constructed in 1998, exhausting through stack SV-6, capacity: 420 gallons.
- (h) Two (2) storage tanks for the No. 2 distillate oil internal combustion engine fuel, constructed in 1998, exhausting through stacks SV-9 and SV-10, capacity: 160 and 224 gallons, respectively.

- (i) Cold-mix cutback asphalt production.

A.3 Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-8-3(c)(3)(I)]

This portable source also includes the following insignificant activities, as defined in 326 IAC 2-7-1(21):

- (a) A gasoline fuel transfer and dispensing operation handling less than or equal to 1,300 gallons per day, such as filling of tanks, locomotives, automobiles, having a storage capacity less than or equal to 10,500 gallons.
- (b) A petroleum fuel, other than gasoline, dispensing facility, having a storage capacity of less than or equal to 10,500 gallons, and dispensing less than or equal to 230,000 gallons per month.
- (c) The following VOC and HAP storage containers: Vessels storing lubricating oil, hydraulic oils, machining oils, and machining fluids.

A.4 FESOP Applicability [326 IAC 2-8-2]

This portable source, otherwise required to have a Part 70 permit as described in 326 IAC 2-7-2(a), has applied to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) to renew a Federally Enforceable State Operating Permit (FESOP).

A.5 Prior Permits Superseded [326 IAC 2-1.1-9.5]

- (a) All terms and conditions of previous permits issued pursuant to permitting programs approved into the state implementation plan have been either
  - (1) incorporated as originally stated,
  - (2) revised, or
  - (3) deletedby this permit.
- (b) All previous registrations and permits are superseded by this permit.

## B.1 Permit No Defense [IC 13]

## B.2 Definitions [326 IAC 2-8-1]

B.3 Permit Term [326 IAC 2-8-4(2)] [326 IAC 2-1.1-9.5]

#### B.4 Enforceability [326 IAC 2-8-6]

- ## B.5 Termination of Right to Operate [326 IAC 2-8-9] [326 IAC 2-8-3(h)]

B.6 Severability [326 IAC 2-8-4(4)]

B.7 Property Rights or Exclusive Privilege [326 IAC 2-8-4(5)(D)]

## B.8 Duty to Provide Information [326 IAC 2-8-4(5)(E)]

- (a) The Permittee shall furnish to IDEM, OAQ, and Indianapolis Office of Environmental Services within a reasonable time, any information that IDEM, OAQ, and Indianapolis Office of Environmental Services may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The submittal by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1). Upon request, the Permittee shall also furnish to IDEM, OAQ, and Indianapolis Office of Environmental Services copies of records required to be kept by this permit.
- (b) For information furnished by the Permittee to IDEM, OAQ, the Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U.S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

**B.9 Compliance Order Issuance [326 IAC 2-8-5(b)]**

IDEM, OAQ and Indianapolis Office of Environmental Services may issue a compliance order to this Permittee upon discovery that this permit is in nonconformance with an applicable requirement. The order may require immediate compliance or contain a schedule for expeditious compliance with the applicable requirement.

**B.10 Compliance with Permit Conditions [326 IAC 2-8-4(5)(A)] [326 IAC 2-8-4(5)(B)]**

- (a) The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit is grounds for:
  - (1) Enforcement action;
  - (2) Permit termination, revocation and reissuance, or modification; and
  - (3) Denial of a permit renewal application.
- (b) It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
- (c) An emergency does constitute an affirmative defense in an enforcement action provided the Permittee complies with the applicable requirements set forth in Section B, Emergency Provisions.

**B.11 Certification [326 IAC 2-8-3(d)] [326 IAC 2-8-4(3)(C)(i)] [326 IAC 2-8-5(1)]**

- (a) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted shall contain certification by an authorized individual of truth, accuracy, and completeness. This certification, shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) One (1) certification shall be included, using the attached Certification Form, with each submittal requiring certification.
- (c) An authorized individual is defined at 326 IAC 2-1.1-1(1).

**B.12 Annual Compliance Certification [326 IAC 2-8-5(a)(1)]**

- (a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. All certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted in letter form no later than July 1 of each year to:

Indiana Department of Environmental Management  
Compliance Branch, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

and

Indianapolis Office of Environmental Services  
2700 South Belmont Ave  
Indianapolis, IN 46221

- (b) The annual compliance certification report required by this permit shall be considered timely

if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ and Indianapolis Office of Environmental Services on or before the date it is due.

- (c) The annual compliance certification report shall include the following:
- (1) The appropriate identification of each term or condition of this permit that is the basis of the certification;
  - (2) The compliance status;
  - (3) Whether compliance was continuous or intermittent;
  - (4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-8-4(3); and
  - (5) Such other facts as specified in Sections D of this permit, IDEM, OAQ and Indianapolis Office of Environmental Services, may require to determine the compliance status of the source.

The notification which shall be submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

B.13 Preventive Maintenance Plan [326 IAC 1-6-3] [326 IAC 2-8-4(9)] [326 IAC 2-8-5(a)(1)]

- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall maintain and implement Preventive Maintenance Plans (PMPs), including the following information on each facility:
- (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
  - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
  - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.
- (b) The Permittee shall implement the PMPs, including any required record keeping, as necessary to ensure that failure to implement a PMP does not cause or contribute to an exceedance of any limitation on emissions or potential to emit.
- (c) A copy of the PMPs shall be submitted to IDEM, OAQ, and Indianapolis Office of Environmental Services upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ, and Indianapolis Office of Environmental Services. IDEM, OAQ, and Indianapolis Office of Environmental Services may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or contributes to any violation. The PMP does not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (d) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation, Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

**B.14 Emergency Provisions [326 IAC 2-8-12]**

- (a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation, except as provided in 326 IAC 2-8-12.
- (b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a health-based or technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describes the following:

- (1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;
- (2) The permitted facility was at the time being properly operated;
- (3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;
- (4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ and the Indianapolis Office of Environmental Services, within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone No.: 1-800-451-6027 (ask for Office of Air Quality, Compliance Section)  
or,  
Telephone No.: 317-233-5674 (ask for Compliance Section)  
Facsimile No.: 317-233-5967

Indianapolis Office of Environmental Services  
317-327-2237, fax 317-327-2274

- (5) For each emergency lasting one (1) hour or more, the Permittee submitted the attached Emergency Occurrence Report Form or its equivalent, either by mail or facsimile to:

Indiana Department of Environmental Management  
Compliance Branch, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

and

Indianapolis Office of Environmental Services  
2700 South Belmont Ave  
Indianapolis, IN 46221

within two (2) working days of the time when emission limitations were exceeded due to the emergency.

The notice fulfills the requirement of 326 IAC 2-8-4(3)(C)(ii) and must contain the following:

- (A) A description of the emergency;

(B) Any steps taken to mitigate the emissions; and

(C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(6) The Permittee immediately took all reasonable steps to correct the emergency.

(c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.

(d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.

(e) IDEM, OAQ and Indianapolis Office of Environmental Services may require that the Preventive Maintenance Plans required under 326 IAC 2-8-3(c)(6) be revised in response to an emergency.

(f) Failure to notify IDEM, OAQ and Indianapolis Office of Environmental Services by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-8 and any other applicable rules.

(g) Operations may continue during an emergency only if the following conditions are met:

(1) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.

(2) If an emergency situation causes a deviation from a health-based limit, the Permittee may not continue to operate the affected emissions facilities unless:

(A) The Permittee immediately takes all reasonable steps to correct the emergency situation and to minimize emissions; and

(B) Continued operation of the facilities is necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw material of substantial economic value.

Any operations shall continue no longer than the minimum time required to prevent the situations identified in (g)(2)(B) of this condition.

(h) Permittee shall include all emergencies in the Quarterly Deviation and Compliance Monitoring Report.

B.15 Deviations from Permit Requirements and Conditions [326 IAC 2-8-4(3)(C)(ii)]

(a) Deviations from any permit requirements (for emergencies see Section B - Emergency Provision), the probable cause of such deviations, and any response steps or preventive measures taken shall be reported to:

Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

and

Indianapolis Office of Environmental Services  
2700 South Belmont Ave  
Indianapolis, IN 46221

using the attached Quarterly Deviation and Compliance Monitoring Report, or its equivalent. A deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does need to be included in this report.

The Quarterly Deviation and Compliance Monitoring Report does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (b) A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.

**B.16 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-8-4(5)(C)]**  
**[326 IAC 2-8-7(a)] [326 IAC 2-8-8]**

- (a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a FESOP modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-8-4(5)(C)] The notification by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ or Indianapolis Office of Environmental Services determines any of the following:
  - (1) That this permit contains a material mistake.
  - (2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.
  - (3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-8-8(a)]
- (c) Proceedings by IDEM, OAQ or Indianapolis Office of Environmental Services, to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-8-8(b)]
- (d) The reopening and revision of this permit, under 326 IAC 2-8-8(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ or Indianapolis Office of Environmental Services, at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ or Indianapolis Office of Environmental Services, may provide a shorter time period in the case of an emergency. [326 IAC 2-8-8(c)]

**B.17 Permit Renewal [326 IAC 2-8-3(h)]**

- (a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ or Indianapolis Office of Environmental Services and shall include the information specified in 326 IAC 2-8-3. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40). The renewal application does require the certification by the "authorized individual" as defined by 326 IAC

2-1.1-1(1).

Request for renewal shall be submitted to:

Indiana Department of Environmental Management  
Permits Branch, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, IN 46206-6015

and

Indianapolis Office of Environmental Services  
2700 South Belmont Ave  
Indianapolis, IN 46221

(b) Timely Submittal of Permit Renewal [326 IAC 2-8-3]

(1) A timely renewal application is one that is:

- (A) Submitted at least nine (9) months prior to the date of the expiration of this permit; and
- (B) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ and Indianapolis Office of Environmental Services on or before the date it is due.

(2) If IDEM, OAQ and Indianapolis Office of Environmental Services, upon receiving a timely and complete permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect until the renewal permit has been issued or denied.

(c) Right to Operate After Application for Renewal [326 IAC 2-8-9]

If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-8 until IDEM, OAQ and Indianapolis Office of Environmental Services takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified in writing by IDEM, OAQ and Indianapolis Office of Environmental Services, any additional information identified as needed to process the application.

B.18 Permit Amendment or Revision [326 IAC 2-8-10] [326 IAC 2-8-11.1]

(a) Permit amendments and revisions are governed by the requirements of 326 IAC 2-8-10 or 326 IAC 2-8-11.1 whenever the Permittee seeks to amend or modify this permit.

(b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management  
Permits Branch, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

and

Indianapolis Office of Environmental Services  
2700 South Belmont Ave  
Indianapolis, IN 46221

Any such application shall be certified by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (c) The Permittee may implement the administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]
- (d) No permit amendment or modification is required for the addition, operation or removal of a nonroad engine, as defined in 40 CFR 89.2.

B.19 Operational Flexibility [326 IAC 2-8-15] [326 IAC 2-8-11.1]

- (a) The Permittee may make any change or changes at this source that are described in 326 IAC 2-8-15(b) through (d), without prior permit revision, if each of the following conditions is met:

- (1) The changes are not modifications under any provision of Title I of the Clean Air Act;
- (2) Any approval required by 326 IAC 2-8-11.1 has been obtained;
- (3) The changes do not result in emissions which exceed the emissions allowable under this permit (whether expressed herein as a rate of emissions or in terms of total emissions);
- (4) The Permittee notifies the:

Indiana Department of Environmental Management  
Permits Branch, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

and

Indianapolis Office of Environmental Services  
2700 South Belmont Ave  
Indianapolis, IN 46221

and

United States Environmental Protection Agency, Region V  
Air and Radiation Division, Regulation Development Branch - Indiana (AR-18J)  
77 West Jackson Boulevard  
Chicago, Illinois 60604-3590

in advance of the change by written notification at least ten (10) days in advance of the proposed change. The Permittee shall attach every such notice to the Permittee's copy of this permit; and

- (5) The Permittee maintains records on-site which document, on a rolling five (5) year basis, all such changes and emissions trading that are subject to 326 IAC 2-8-15(b) through (d) and makes such records available, upon reasonable request, to public

review.

Such records shall consist of all information required to be submitted to IDEM, OAQ and Indianapolis Office of Environmental Services in the notices specified in 326 IAC 2-8-15(b)(2), (c)(1), and (d).

- (b) Emission Trades [326 IAC 2-8-15(c)]  
The Permittee may trade increases and decreases in emissions in the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-8-15(c).
- (c) Alternative Operating Scenarios [326 IAC 2-8-15(d)]  
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-8-4(7). No prior notification of IDEM, OAQ or U.S. EPA is required.

**B.20 Permit Revision Requirement [326 IAC 2-8-11.1]**

A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2 and 326 IAC 2-8-11.1.

**B.21 Inspection and Entry [326 IAC 2-8-5(a)(2)] [IC 13-14-2-2][IC13-30-3-1]**

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ and Indianapolis Office of Environmental Services U.S. EPA, or an authorized representative to perform the following:

- (a) Enter upon the Permittee's premises where a FESOP source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- (b) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- (c) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, inspect at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;
- (d) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and
- (e) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

**B.22 Transfer of Ownership or Operational Control [326 IAC 2-8-10]**

- (a) The Permittee must comply with the requirements of 326 IAC 2-8-10 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.
- (b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be

submitted to:

Indiana Department of Environmental Management  
Permits Branch, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

and

Indianapolis Office of Environmental Services  
2700 South Belmont Ave  
Indianapolis, IN 46221

The application which shall be submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

B.23 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-8-4(6)] [326 IAC 2-8-16][326 IAC 2-1.1-7]

- (a) The Permittee shall pay annual fees to IDEM, OAQ, within thirty (30) calendar days of receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ the applicable fee is due April 1 of each year.
- (b) Failure to pay may result in administrative enforcement action, or revocation of this permit.
- (c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-4320 (ask for OAQ, I/M & Billing Section), to determine the appropriate permit fee.

## SECTION C

## SOURCE OPERATION CONDITIONS

<b>Entire Source</b>
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### Emissions Limitations and Standards [326 IAC 2-8-4(1)]

**C.1**     Particulate Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) pounds per hour [40 CFR 52 Subpart P] [326 IAC 6-3-2]

Pursuant to 40 CFR 52 Subpart P, particulate matter emissions from any process not already regulated by 326 IAC 6-1 or any New Source Performance Standard, and which has a maximum process weight rate less than 100 pounds per hour shall not exceed 0.551 pounds per hour.

**C.2**     Overall Source Limit [326 IAC 2-8]

The purpose of this permit is to limit this source's potential to emit to less than major source levels for the purpose of Section 502(a) of the Clean Air Act.

(a)     Pursuant to 326 IAC 2-8:

- (1)     The potential to emit any regulated pollutant, except particulate matter (PM), from the entire source shall be limited to less than one-hundred (100) tons per twelve (12) consecutive month period. This limitation shall also make the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) and 326 IAC 2-3 (Emission Offset) not applicable;
- (2)     The potential to emit any individual hazardous air pollutant (HAP) from the entire source shall be limited to less than ten (10) tons per twelve (12) consecutive month period; and
- (3)     The potential to emit any combination of HAPs from the entire source shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period.

(b)     This condition shall include all emission points at this source including those that are insignificant as defined in 326 IAC 2-7-1(21). The source shall be allowed to add insignificant activities not already listed in this permit, provided that the source's potential to emit does not exceed the above specified limits.

(c)     Section D of this permit contains independently enforceable provisions to satisfy this requirement.

**C.3**     Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a)     Opacity shall not exceed an average of thirty percent (30%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b)     Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of thirty percent (30%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.4 Open Burning [326 IAC 4-1] [IC 13-17-9]

The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1.

C.5 Incineration [326 IAC 4-2] [326 IAC 9-1-2(3)]

The Permittee shall not operate an incinerator or incinerate any waste or refuse except as provided in 326 IAC 4-2 and in 326 IAC 9-1-2.

C.6 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions).

C.7 Fugitive Particulate Matter Emission Limitations [326 IAC 6-5]

Pursuant to 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations), fugitive particulate matter emissions shall be controlled according to the plan submitted on January 8, 1998. The plan consists of:

- (a) unpaved roads shall be controlled by one or more of the following:
  - (1) treating with water on an as-needed basis.
  - (2) paving with asphalt.
  - (3) treating with emulsified asphalt on an as-needed basis.
  - (4) double chip and seal the road surface on an as-needed basis.
- (b) dust from storage piles shall be controlled by one or more of the following measures:
  - (1) treating the stockpile area with water on an as-needed basis.
  - (2) treating the stockpiles with water on an as-needed basis.
  - (3) maintain minimum size and number of aggregate storage piles.
  - (4) treating stockpiles with emulsified asphalt on an as needed basis.

- (c) dust from outdoor conveying of aggregates shall be controlled by applying water at the feed and intermediate points on an as needed basis.
- (d) dust from the transferring of aggregates shall be controlled by one or more of the following measures:
  - (1) minimize the vehicular distance between transfer points and enclose transfer points.
  - (2) apply water to transfer points on an as-needed basis.
  - (3) enclose the transfer points.
- (e) dust from the transportation of aggregate by truck, front end loader, etc., shall be controlled by one or more of the following measures:
  - (1) tarping aggregate hauling vehicles.
  - (2) maintain 10 mile per hour speed limits.
  - (3) maintain vehicle bodies in a condition that prevents leakage.
  - (4) spray aggregates with water.
- (f) dust from the loading and unloading of aggregates shall be controlled by one or more of the following measures:
  - (1) reduce free fall distance to a minimum.
  - (2) reduce the rate of discharge.
  - (3) spray water on aggregates on an as-needed basis.

**C.8 Operation of Equipment [326 IAC 2-8-5(a)(4)]**

Except as otherwise provided by statute, rule or in this permit, all air pollution control equipment listed in this permit and used to comply with an applicable requirement shall be operated at all times that the emission unit vented to the control equipment is in operation.

**C.9 Stack Height [326 IAC 1-7]**

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted.

**C.10 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]**

- (a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.
- (b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:

- (1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or
- (2) If there is a change in the following:
  - (A) Asbestos removal or demolition start date;
  - (B) Removal or demolition contractor; or
  - (C) Waste disposal site.
- (c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).
- (d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

Indiana Department of Environmental Management  
Asbestos Section, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

and

Indianapolis Office of Environmental Services  
2700 South Belmont Ave  
Indianapolis, IN 46221

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (e) Procedures for Asbestos Emission Control  
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1 emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.
- (f) Demolition and renovation  
The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).
- (g) Indiana Accredited Asbestos Inspector  
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Accredited Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement to use an Indiana Accredited Asbestos inspector is not federally enforceable.

### **Testing Requirements [326 IAC 2-8-4(3)]**

#### **C.11 Performance Testing [326 IAC 3-6]**

- (a) All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Quality  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

and

Indianapolis Office of Environmental Services  
2700 South Belmont Ave  
Indianapolis, IN 46221

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ and Indianapolis Office of Environmental Services not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ, and Indianapolis Office of Environmental Services, if the source submits to IDEM, OAQ, a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

### **Compliance Requirements [326 IAC 2-1.1-11]**

#### **C.12 Compliance Requirements [326 IAC 2-1.1-11]**

The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements by issuing an order under 326 IAC 2-1.1-11. Any monitoring or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the commissioner or the U. S. EPA.

### **Compliance Monitoring Requirements [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]**

#### **C.13 Compliance Monitoring [326 IAC 2-8-4(3)] [326 IAC 2-8-5(a)(1)]**

Unless otherwise specified in this permit, all monitoring and record keeping requirements not already legally required shall be implemented upon issuance of this permit. If required by Section D, the Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment.

Unless otherwise specified in the approval for the new emissions unit, compliance monitoring for new emission units or emission units added through a permit revision shall be implemented when operation begins.

**C.14 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]**

Any monitoring or testing performed required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, 40 CFR 60 Appendix B, 40 CFR 63 or other approved methods as specified in this permit.

**C.15 Pressure Gauge and Other Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-8-4(3)] [326 IAC 2-8-5(1)]**

- (a) Whenever a condition in this permit requires the measurement of pressure drop across any part of the unit or its control device, the gauge employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent ( $\pm 2\%$ ) of full scale reading.
- (b) Whenever a condition in this permit requires the measurement of a temperature, flow rate, or pH level, the instrument employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent ( $\pm 2\%$ ) of full scale reading.
- (c) The Permittee may request the IDEM, OAQ approve the use of a pressure gauge or other instrument that does not meet the above specifications provided the Permittee can demonstrate an alternative pressure gauge or other instrument specification will adequately ensure compliance with permit conditions requiring the measurement of pressure drop or other parameters.

**Corrective Actions and Response Steps [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]**

**C.16 Risk Management Plan [326 IAC 2-8-4] [40 CFR 68.215]**

If a regulated substance as defined in is present at a source in more than a threshold quantity, the source must comply with the applicable requirements of 40 CFR 68.

**C.17 Compliance Response Plan - Preparation, Implementation, Records, and Reports [326 IAC 2-8-4] [326 IAC 2-8-5]**

- (a) The Permittee is required to prepare a Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. A CRP shall be submitted to IDEM, OAQ and Indianapolis Office of Environmental Services, upon request. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee, supplemented from time to time by the Permittee, maintained on site, and is comprised of:
  - (1) Reasonable response steps that may be implemented in the event that a response step is needed pursuant to the requirements of Section D of this permit; and an expected time frame for taking reasonable response steps.
  - (2) If, at any time, the Permittee takes reasonable response steps that are not set forth in the Permittee's current Compliance Response Plan and the Permittee documents such response in accordance with subsection (e) below, the Permittee shall amend its Compliance Response Plan to include such response steps taken.
- (b) For each compliance monitoring condition of this permit, reasonable response steps shall be taken when indicated by the provisions of that compliance monitoring condition as follows:
  - (1) Reasonable response steps shall be taken as set forth in the Permittee's current Compliance Response Plan; or
  - (2) If none of the reasonable response steps listed in the Compliance Response Plan is applicable or responsive to the excursion, the Permittee shall devise and implement additional response steps as expeditiously as practical. Taking such additional

response steps shall not be considered a deviation from this permit so long as the Permittee documents such response steps in accordance with this condition.

- (3) If the Permittee determines that additional response steps would necessitate that the emissions unit or control device be shut down, the IDEM, OAQ shall be promptly notified of the expected date of the shut down, the status of the applicable compliance monitoring parameter with respect to normal, and the results of the actions taken up to the time of notification.
  - (4) Failure to take reasonable response steps shall be considered a deviation from the permit.
- (c) The Permittee is not required to take any further response steps for any of the following reasons:
- (1) A false reading occurs due to the malfunction of the monitoring equipment and prompt action was taken to correct the monitoring equipment.
  - (2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for an administrative amendment to the permit, and such request has not been denied.
  - (3) An automatic measurement was taken when the process was not operating.
  - (4) The process has already returned or is returning to operating within "normal" parameters and no response steps are required.
- (d) When implementing reasonable steps in response to a compliance monitoring condition, if the Permittee determines that an exceedance of an emission limitation has occurred, the Permittee shall report such deviations pursuant to Section B-Deviations from Permit Requirements and Conditions.
- (e) The Permittee shall record all instances when, in accordance with Section D, response steps are taken. In the event of an emergency, the provisions of 326 IAC 2-8-12 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.
- (f) Except as otherwise provided by a rule or provided specifically in Section D, all monitoring as required in Section D shall be performed when the emission unit is operating, except for time necessary to perform quality assurance and maintenance activities.

C.18 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-8-4]  
[326 IAC 2-8-5]

- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.
- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.

- (c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The response action documents submitted pursuant to this condition do require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

#### **Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]**

##### **C.19 Emission Statement [326 IAC 2-6] [326 IAC 2-8-4(3)]**

- (a) The Permittee shall submit an emission statement certified pursuant to the requirements of 326 IAC 2-6. This statement must be received in accordance with the compliance schedule specified in 326 IAC 2-6-3 and must comply with the minimum requirements specified in 326 IAC 2-6-4. The submittal should cover the period defined in 326 IAC 2-6-2(8). The statement must be submitted to:

Indiana Department of Environmental Management  
Technical Support and Modeling Section, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

and

Indianapolis Office of Environmental Services  
2700 South Belmont Ave  
Indianapolis, IN 46221

The emission statement does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (b) The emission statement required by this permit shall be considered timely if the date post-marked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ and Indianapolis Office of Environmental Services, on or before the date it is due.

##### **C.20 General Record Keeping Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-5]**

- (a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.
- (b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

##### **C.21 General Reporting Requirements [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11]**

- (a) The source shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported. This report shall be submitted within thirty (30) days of the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Quality  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

and

Indianapolis Office of Environmental Services  
2700 South Belmont Ave  
Indianapolis, IN 46221

- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ and Indianapolis Office of Environmental Services, on or before the date it is due.
- (d) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (e) Reporting periods are based on calendar years.

#### **Portable Source Requirement**

##### **C.22 Relocation of Portable Sources [326 IAC 2-14-4]**

- (a) This permit is approved for operation in all areas of Indiana except in severe nonattainment areas for ozone (at the time of this permit's issuance these areas were Lake and Porter Counties). This determination is based on the requirements of Prevention of Significant Deterioration in 326 IAC 2-2 and 40 CFR 52.21, and Emission Offset requirements in 326 IAC 2-3. Prior to locating in any severe nonattainment area, the Permittee must submit a request and obtain a permit modification.
- (b) A request to relocate shall be submitted to IDEM, OAQ at least thirty (30) days prior to the intended date of relocation. This submittal shall include the following:
- (1) A list of governmental officials entitled to receive notice of application to relocate. IC 13-15-3-1
  - (2) A list of adjacent landowners that the Permittee will send written notice to not more than ten (10) days after submission of the request to relocate. IC 13-15-8

The notification by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (c) A "Relocation Site Approval" letter shall be obtained prior to relocating.
- (d) The Permittee shall also notify the applicable local air pollution control agency when relocating to, or from, one the following:
- (1) Madison County - (Anderson Office of Air Management)

- (2) City of Evansville plus four (4) miles beyond the corporate limits but not outside Vanderburgh County - (Evansville EPA)
- (3) City of Gary - (Gary Department of Environmental Affairs)
- (4) City of Hammond - (Hammond Department of Environmental Management)
- (5) Marion County - (Indianapolis Office of Environmental Services)
- (6) St. Joseph County - (St. Joseph County Health Department)
- (7) Vigo County - (Vigo County Air Pollution Control)
- (e) A valid operation permit consists of this document and any subsequent "Relocation Site Approval" letter specifying the current location of the portable plant.

### **Stratospheric Ozone Protection**

#### **C.23 Compliance with 40 CFR 82 and 326 IAC 22-1**

Pursuant to 40 CFR 82 (Protection of Stratospheric Ozone), Subpart F, except as provided for motor vehicle air conditioners in Subpart B, the Permittee shall comply with the standards for recycling and emissions reduction:

- (a) Persons opening appliances for maintenance, service, repair or disposal must comply with the required practices pursuant to 40 CFR 82.156
- (b) Equipment used during the maintenance, service, repair or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.
- (c) Persons performing maintenance, service, repair or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

## SECTION D.1

## FACILITY OPERATION CONDITIONS

### Facility Description [326 IAC 2-8-4(10)]:

- (a) One (1) hot mix drum mixer, constructed in 1998, equipped with a baghouse for particulate matter control, exhausting through stack SV-1, capacity: 400 tons per hour.
- (b) One (1) dryer burner, constructed in 1998, firing waste oil as a primary fuel and No. 2 distillate oil, No. 4 distillate oil, natural gas and butane gas as backup fuels, exhausting through stack SV-1, rated at 120 million British thermal units per hour.
- (c) One (1) hot oil heater, constructed in 1998, firing No. 2 fuel oil as a primary fuel with natural gas and propane gas as backup fuels, exhausting through stack SV-2, rated at 2.15 million British thermal units per hour
- (d) Two (2) reciprocating internal combustion engines, constructed in 1998, firing No. 2 fuel oil, exhausting through stacks SV-7 and SV-8, rated at 545 and 50 kilowatts (5.473 and 0.505 million British thermal units per hour), respectively.
- (e) Two (2) liquid asphalt storage tanks, constructed in 1998, exhausting through stacks SV-3 and SV-4, capacity: 35,000 and 20,000 gallons, respectively.
- (f) One (1) waste oil storage tank for burner fuel, constructed in 1998, exhausting through stack SV-5, capacity: 15,000 gallons.
- (g) One (1) fuel oil storage tank for hot oil heater fuel, constructed in 1998, exhausting through stack SV-6, capacity: 420 gallons.
- (h) Two (2) storage tanks for the No. 2 distillate oil internal combustion engine fuel, constructed in 1998, exhausting through stacks SV-9 and SV-10, capacity: 160 and 224 gallons, respectively.
- (i) Cold-mix cutback asphalt production.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

### Emission Limitations and Standards [326 IAC 2-8-4(1)]

#### D.1.1 General Provisions Relating to NSPS [326 IAC 12-1] [40 CFR 60, Subpart A]

The provisions of 40 CFR 60 Subpart A - General Provisions, which are incorporated as 326 IAC 12-1, apply to the facility described in this section except when otherwise specified in 40 CFR 60 Subpart I.

#### D.1.2 Particulate Matter 10 Microns (PM<sub>10</sub>) [326 IAC 2-8-4] [326 IAC 2-2] [40 CFR 52.21] [326 IAC 2-3]

- (a) Pursuant to 326 IAC 2-8-4, emissions of particulate matter 10 microns or less in diameter (PM<sub>10</sub>) from the aggregate dryer/mixer shall not exceed 0.119 pounds per ton of asphalt produced, including both filterable and condensable fractions.
- (b) The source shall not produce more than one million (1,000,000) tons of asphalt per 365 consecutive day period, equivalent to PM<sub>10</sub> emissions of 59.5 tons per year based on the 0.119 pounds of PM<sub>10</sub> per ton of asphalt produced. Compliance with this limit will satisfy 326 IAC 2-8-4. Therefore, the requirements of 326 IAC 2-2, 2-3, and the Part 70 rules (326 IAC 2-7) do not apply.

**D.1.3 Particulate Matter (PM) [40 CFR 60.90]**

Pursuant to the New Source Performance Standard, 326 IAC 12, (40 CFR Part 60.90, Subpart I), no owner or operator subject to the provisions of Subpart I shall discharge into the atmosphere from any affected facility any gases which:

- (a) Contain particulate matter in excess of 0.04 grains per dry standard cubic foot; or
- (b) Exhibit twenty (20%) percent opacity, or greater.

**D.1.4 Particulate Matter (PM) [326 IAC 6-1] [326 IAC 2-2]**

Pursuant to 326 IAC 6-1-2(a), the owner or operator shall not allow or permit discharge to the atmosphere of any gases from the one (1) drum mixer which contain particulate matter in excess of 0.03 grains per dry standard cubic foot, equivalent to 12.58 pounds per hour at a flow rate of 70,000 acfm and a temperature of 260 degrees Fahrenheit.

Compliance with these limits renders the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

**D.1.5 Sulfur Dioxide (SO<sub>2</sub>) [326 IAC 2-8-4] [326 IAC 7-1.1-1] [326 IAC 7-2-1] [326 IAC 2-2]**

- (a) Pursuant to 326 IAC 2-8-4, the input of waste oil to the dryer/burner shall be limited to less than 1,777,570 gallons per 365 consecutive day period which is equivalent to SO<sub>2</sub> emissions of less than 95.1 tons per year. The SO<sub>2</sub> emissions from the two (2) engines have been accounted for in the limit by equivalency by the number of hours of operation. The applicant has stated that keeping track of the number of hours of operation of the engines is preferable to keeping track of amount of the No. 2 distillate oil fired by the engines. The full SO<sub>2</sub> potential emission rate of 4.85 tons per year from the hot oil heater has been assumed in computing the limits
- (b) Pursuant to 326 IAC 7-1.1-2, the sulfur content of the waste oil shall not exceed one percent (1.0%) by weight. Pursuant to 326 IAC 7-2-1, compliance shall be demonstrated on a thirty (30) day rolling weighted average.
- (c) For purposes of determining compliance based on SO<sub>2</sub> emissions, each gallon of No.2 distillate oil shall be equivalent to 0.6636 gallons of waste oil, each gallon of No.4 distillate oil shall be equivalent to 0.7010 gallons of waste oil, each gallon of butane and propane shall be equivalent to 0.000187 gallons of waste oil, and each million cubic feet of natural gas shall be equivalent to 5.607 gallons of waste oil. Each hour of operation of the 0.505 million British thermal units per hour engine shall be equivalent to 1.369 gallons of waste oil and each hour of operation of the 5.473 million British thermal units per hour engine shall be equivalent to 25.8 gallons of waste oil.
- (d) Pursuant to 326 IAC 7-1.1-2, the sulfur content of the No.2 and No.4 distillate oils shall not exceed five tenth percent (0.5%) by weight. Pursuant to 326 IAC 7-2-1, compliance shall be demonstrated on a thirty (30) day rolling weighted average.

Compliance with these limits renders the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

**D.1.6 Nitrogen Oxides (NO<sub>x</sub>) [326 IAC 2-8-4]**

- (a) Pursuant to 326 IAC 2-8-4, the input of natural gas to the dryer/burner shall be limited to less than 1036.8 million cubic feet per 365 consecutive day period which is equivalent to NO<sub>x</sub> emissions of less than 98.5 tons per year. The NO<sub>x</sub> emissions from the two (2) engines have been accounted for in the limit by equivalency by the number of hours of operation and CO, VOC, PM and PM<sub>10</sub> have had the full potential emissions listed for the engines. The full NO<sub>x</sub> potential emission rate of 1.44 tons per year from the hot oil heater has been assumed in

computing the limits.

- (b) For purposes of determining compliance based on NO<sub>x</sub> emissions every 1,000 gallons of butane shall be equivalent to 0.1105 million cubic feet of natural gas, every 1,000 gallons of propane shall be equivalent to 0.100 million cubic feet of natural gas, every 1,000 gallons of waste oil shall be equivalent to 0.0842 million cubic feet of natural gas, every 1,000 gallons of No. 2 distillate oil shall be equivalent to 0.1263 million cubic feet of natural gas, every 1,000 gallons of No. 4 distillate oil shall be equivalent to 0.1263 million cubic feet of natural gas and each hour of operation of the 0.505 million British thermal units per hour engine shall be equivalent to 0.0117 million cubic feet of natural gas and each hour of operation of the 5.473 million British thermal units per hour engine shall be equivalent to 0.0893 million cubic feet of natural gas.

**D.1.7 Volatile Organic Compounds (VOC) [326 IAC 2-8-4] [326 IAC 2-2]**

Pursuant to 326 IAC 2-8-4, liquid binder used in the production of cold mix cutback asphalt shall be limited to less than 2,124 tons of liquid binder per 365 consecutive day period, and the daily average diluent content of the liquid binder shall not exceed seven (7.0%) percent. This is equivalent to VOC emissions of less than 92.2 tons per year.

Compliance with this limit renders the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) and 326 IAC 2-7 not applicable.

**D.1.8 Volatile Organic Compounds (VOC) [326 IAC 8-5-2]**

Pursuant to 326 IAC 8-5-2 (Miscellaneous Operations: asphalt paving), the owner or operator shall: not cause or allow the use of asphalt emulsion containing more than seven (7.0) percent oil distillate by volume of emulsion for any paving application except the following purposes:

- (a) penetrating prime coating
- (b) stockpile storage
- (c) application during the months of November, December, January, February and March

**D.1.9 Preventive Maintenance Plan [326 IAC 2-8-4(9)]**

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the drum mixer/dryer burner and any control devices.

**Compliance Determination Requirements**

**D.1.10 Testing Requirements [326 IAC 2-8-5(1), (4)] [326 IAC 2-1.1-11]**

The Permittee shall perform PM and PM<sub>10</sub> testing in order to demonstrate compliance with Conditions D.1.2, D.1.3, and D.1.4 utilizing methods as approved by the Commissioner. These tests shall be conducted prior to within one-hundred eighty (180) days after issuance of this permit, and shall be repeated at least once every five (5) years from the date of the last valid compliance demonstration. PM<sub>10</sub> includes filterable and condensable PM<sub>10</sub>. Testing shall be conducted in accordance with Section C- Performance Testing.

**D.1.11 VOC Emissions**

Compliance with Condition D.1.7 shall be demonstrated at the end of each day based on the liquid binder usage for the 365 consecutive day period.

**D.1.12 Sulfur Dioxide Emissions and Sulfur Content**

Compliance shall be determined utilizing one of the following options.

- (a) Pursuant to 326 IAC 3-7-4, the Permittee shall demonstrate that the sulfur dioxide emissions

do not exceed five-tenths (0.5) pounds per million British thermal units heat input by:

- (1) Providing vendor analysis of fuel delivered, if accompanied by a vendor certification; or
- (2) Analyzing the oil sample to determine the sulfur content of the oil via the procedures in 40 CFR 60, Appendix A, Method 19.
  - (A) Oil samples may be collected from the fuel tank immediately after the fuel tank is filled and before any oil is combusted; and
  - (B) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling.
- (b) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the 120 million British thermal units per hour burner, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6.

A determination of noncompliance pursuant to any of the methods specified in (a) or (b) above shall not be refuted by evidence of compliance pursuant to the other method.

#### **D.1.13 Used Oil Requirements [329 IAC 13]**

The waste oil burned in the aggregate dryer shall comply with the used oil requirements specified in 329 IAC 13 (Used Oil Management). Pursuant to 329 IAC 13-3-2 (Used Oil Specifications), used oil burned for energy recovery that is classified as off-specification used oil fuel shall comply with the provisions of 329 IAC 13-8 (Used Oil Burners Who Burn Off-specification Used Oil For Energy Recovery), including:

- (a) Receipt of an EPA identification number as outlined in 329 IAC 13-8-3 (Notification),
- (b) Compliance with the used oil storage requirements specified in 329 IAC 13-8-5 (Used Oil Storage), and
- (c) Maintaining records pursuant to 329 IAC 13-8-6 (Tracking).

The burning of mixtures of used oil and hazardous waste that is regulated under 329 IAC 3.1 is prohibited at this source.

#### **D.1.14 Particulate Control**

In order to comply with Conditions D.1.2 and D.1.3, the baghouse for PM and PM<sub>10</sub> control shall be in operation and control emissions from the drum mixer/dryer at all times that the drum mixer/dryer is in operation and exhausting to the outside atmosphere.

### **Compliance Monitoring Requirements [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]**

#### **D.1.15 Visible Emissions Notations**

- (a) Visible emission notations of the conveyers, material transfer points, and the drum mixer/burner stack exhaust shall be performed once per shift during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.

#### D.1.16 Parametric Monitoring

The Permittee shall record the total static pressure drop across the baghouse used in conjunction with the mixer/dryer, at least once per shift when the drying/mixing process is in operation when venting to the atmosphere. When for any one reading, the pressure drop across the baghouse is outside the normal range of 1.0 and 9.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan-Failure to Take Response Steps. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

#### D.1.17 Baghouse Inspections

An inspection shall be performed each calendar quarter of all bags controlling the dryer/burner operation when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting indoors. All defective bags shall be replaced.

#### D.1.18 Broken or Failed Bag Detection

In the event that bag failure has been observed:

- (a) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if there are no visible emissions or if the event qualifies as an emergency and the Permittee satisfies the emergency provisions of this permit (Section B- Emergency Provisions). Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan -Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.
- (b) For single compartment baghouses, if failure is indicated by a significant drop in the baghouse's pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if bag failure is determined by other means, such as gas temperatures, flow rates, air infiltration, leaks, dust traces or triboflows, then failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency

Provisions).

### **Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-16]**

#### **D.1.19 Cutback Asphalt Production Rate**

To document compliance with Condition D.1.7, the Permittee shall maintain daily records at the source of the following values:

- (a) Amount of liquid binder used in the production of cold mix cutback asphalt; and
- (b) Average diluent content of the liquid binder.

#### **D.1.20 Record Keeping Requirements**

- (a) To document compliance with Condition D.1.2, the Permittee shall maintain records of the amount of asphalt produced per day.
- (b) To document compliance with Conditions D.1.5 and D.1.6, the Permittee shall maintain records in accordance with (1) through (7) below. Records maintained for (1) through (7) shall be taken daily and shall be complete and sufficient to establish compliance with the SO<sub>2</sub> and NO<sub>x</sub> emission limits established in Conditions D.1.5 and D.1.6.

- (1) Calendar dates covered in the compliance determination period;
- (2) Actual fuel usage of each fuel used since last compliance determination period and equivalent sulfur dioxide and nitrogen oxide emissions;
- (3) A certification, signed by the owner or operator, that the records of the fuel supplier certifications represent all of the fuel combusted during the period; and

If the fuel supplier certification is used to demonstrate compliance the following, as a minimum, shall be maintained:

- (4) Fuel supplier certifications;
  - (5) The name of the fuel supplier; and
  - (6) A statement from the fuel supplier that certifies the sulfur content of the fuel oil.
  - (7) Amount of hours of operation of each of the two (2) reciprocating internal combustion engines.
- (c) To document compliance with Condition D.1.15, the Permittee shall maintain records of visible emission notations of the conveyors, transfer points, and the dryer/burner stack exhaust SV1 once per shift.
  - (d) To document compliance with Condition D.1.16, the Permittee shall maintain once per shift records of the total static pressure drop.
  - (e) To document compliance with Condition D.1.17, the Permittee shall maintain records of the results of the inspections required under Condition D.1.17.
  - (f) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

#### **D.1.21 Record Keeping [326 IAC 12] [40 CFR 60.110b, Subpart Kb]**

The two (2) asphalt storage tanks, identified as Tank 1 and Tank 2, constructed in 1998, with capacities of 20,000 gallons and 35,000 gallons, respectively, as well as the one (1) waste oil storage tank,

identified as Tank 3, installed in 1998, with a capacity of 15,000 gallons, shall comply with the New Source Performance Standard, 326 IAC 12, (40 CFR Part 60.110b, Subpart Kb). These tanks are subject to only 40 CFR Part 60.116b, paragraphs (a) and (b) which requires the Permittee to maintain accessible records showing the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel. Records shall be kept for the life of the storage tanks.

#### D.1.22 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.1.2, D.1.5, D.1.6 and D.1.7 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY**

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)  
CERTIFICATION**

Source Name: Rieth - Riley Construction Co., Inc.  
Source Address: Portable  
Mailing Address: P.O. Box 477, Goshen, Indiana 46527-0477  
FESOP No.: F 097-15790-05166

**This certification shall be included when submitting monitoring, testing reports/results  
or other documents as required by this permit.**

Please check what document is being certified:

- 9 Annual Compliance Certification Letter
- 9 Test Result (specify) \_\_\_\_\_
- 9 Report (specify) \_\_\_\_\_
- 9 Notification (specify) \_\_\_\_\_
- 9 Affidavit (specify) \_\_\_\_\_
- 9 Other (specify) \_\_\_\_\_

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:

Printed Name:

Title/Position:

Phone:

Date:

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE BRANCH  
100 North Senate Avenue  
P.O. Box 6015  
Indianapolis, Indiana 46206-6015  
Phone: 317-233-5674  
Fax: 317-233-5967**

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)  
EMERGENCY OCCURRENCE REPORT**

Source Name: Rieth - Riley Construction Co., Inc.  
Source Address: Portable  
Mailing Address: P.O. Box 477, Goshen, Indiana 46527-0477  
FESOP No.: F 097-15790-05166

**This form consists of 2 pages**

**Page 1 of 2**

- |  |
|--|
| <p><b>9</b> This is an emergency as defined in 326 IAC 2-7-1(12)</p> <ul style="list-style-type: none"><li><input type="checkbox"/> The Permittee must notify the Office of Air Quality (OAQ), within four (4) business hours (1-800-451-6027 or 317-233-5674, ask for Compliance Section); and</li><li><input type="checkbox"/> The Permittee must submit notice in writing or by facsimile within two (2) working days (Facsimile Number: 317-233-5967), and follow the other requirements of 326 IAC 2-7-16</li></ul> |
|--|

If any of the following are not applicable, mark N/A

Facility/Equipment/Operation:
Control Equipment:
Permit Condition or Operation Limitation in Permit:
Description of the Emergency:
Describe the cause of the Emergency:

If any of the following are not applicable, mark N/A

Page 2 of 2

Date/Time Emergency started:
Date/Time Emergency was corrected:
Was the facility being properly operated at the time of the emergency?    Y    N Describe:
Type of Pollutants Emitted: TSP, PM-10, SO <sub>2</sub> , VOC, NO <sub>x</sub> , CO, Pb, other:
Estimated amount of pollutant(s) emitted during emergency:
Describe the steps taken to mitigate the problem:
Describe the corrective actions/response steps taken:
Describe the measures taken to minimize emissions:
If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:

Form Completed by: \_\_\_\_\_

Title / Position: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

A certification is not required for this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE BRANCH**

**FESOP Monthly Report**

Source Name: Rieth-Riley Construction Co., Inc.  
Source Address: Portable  
Mailing Address: P.O. Box 477, Goshen, Indiana 46527-0477  
FESOP No.: 097-15790-05166  
Facility: Dryer/mixer  
Parameter: Tons of asphalt produced (PM<sub>10</sub>)  
Limit: 1,000,000 tons of asphalt produced per 365 consecutive day period, equivalent to PM<sub>10</sub> emissions less than 59.5 tons per year.

Month: \_\_\_\_\_ Year: \_\_\_\_\_

Day	tons of asphalt produced (this day)	tons of asphalt produced (last 364 days)	tons of asphalt produced (365 day total)	Day	tons of asphalt produced (this day)	tons of asphalt produced (last 364 days)	tons of asphalt produced (365 day total)
1				17			
2				18			
3				19			
4				20			
5				21			
6				22			
7				23			
8				24			
9				25			
10				26			
11				27			
12				28			
13				29			
14				30			
15				31			
16							

9 No deviation occurred in this month.

9 Deviation/s occurred in this month.  
Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_

Title/Position: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE BRANCH**

**FESOP Monthly Report**

Source Name: Rieth-Riley Construction Co., Inc.  
Source Address: Portable  
Mailing Address: P.O. Box 477, Goshen, Indiana 46527-0477  
FESOP No.: 097-15790-05166  
Facility: Dryer/mixer  
Parameter: Gallons of waste oil burned in the aggregate dryer (SO<sub>2</sub>)  
Limit: 1,777,570 gallons of waste oil per 365 consecutive day period, where each gallon of No.2 distillate oil shall be equivalent to 0.6636 gallons of waste oil, each gallon of No.4 distillate oil shall be equivalent to 0.7010 gallons of waste oil, each gallon of butane and propane shall be equivalent to 0.000187 gallons of waste oil, and each million cubic feet of natural gas shall be equivalent to 5.607 gallons of waste oil, equivalent to SO<sub>2</sub> emissions less than 95.1 tons per year. Each hour of operation of the 0.505 million British thermal units per hour engine shall be equivalent to 1.369 gallons of waste oil and each hour of operation of the 5.473 million British thermal units per hour engine shall be equivalent to 25.8 gallons of waste oil.

Month:

Year:

Day	gallons of waste oil or equivalent burned (this day)	gallons of waste oil or equivalent burned (last 364 days)	gallons of waste oil or equivalent burned (365 day total)	Day	gallons of waste oil or equivalent burned (this day)	gallons of waste oil or equivalent burned (last 364 days)	gallons of waste oil or equivalent burned (365 day total)
1				17			
2				18			
3				19			
4				20			
5				21			
6				22			
7				23			
8				24			
9				25			
10				26			
11				27			
12				28			
13				29			
14				30			
15				31			
16							

9 No deviation occurred in this month.

9 Deviation/s occurred in this month.  
Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_  
Title/Position: \_\_\_\_\_  
Signature: \_\_\_\_\_  
Date: \_\_\_\_\_  
Phone: \_\_\_\_\_

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF AIR QUALITY  
 COMPLIANCE BRANCH**

**FESOP Monthly Report**

Source Name: Rieth-Riley Construction Co., Inc.  
 Source Address: Portable  
 Mailing Address: P.O. Box 477, Goshen, Indiana 46527-0477  
 FESOP No.: 097-15790-05166  
 Facility: Dryer/mixer  
 Parameter: Million Cubic Feet of natural gas burned in the aggregate dryer (NO<sub>x</sub>)  
 Limit: Less than 1036.8 million cubic feet of natural gas per 365 consecutive day period, where 1,000 gallons of butane shall be equivalent to 0.111 million cubic feet of natural gas, every 1,000 gallons of propane shall be equivalent to 0.100 million cubic feet of natural gas, every 1,000 gallons of waste oil shall be equivalent to 0.084 million cubic feet of natural gas, every 1,000 gallons of No. 2 distillate oil shall be equivalent to 0.1263 million cubic feet of natural gas, every 1,000 gallons of No. 4 distillate oil shall be equivalent to 0.1263 million cubic feet of natural gas and each hour of operation of the 0.505 million British thermal units per hour engine shall be equivalent to 0.0117 million cubic feet of natural gas and each hour of operation of the 5.473 million British thermal units per hour engine shall be equivalent to 0.0893 million cubic feet of natural gas.

Month:

Year:

Day	Million Cubic Feet of Gas or equivalent burned (this day)	Million Cubic Feet of Gas or equivalent burned (last 364 days)	Million Cubic Feet of Gas or equivalent burned (365 day total)	Day	Million Cubic Feet of Gas or equivalent burned (this day)	Million Cubic Feet of Gas or equivalent burned (last 364 days)	Million Cubic Feet of Gas or equivalent burned (365 day total)
1				17			
2				18			
3				19			
4				20			
5				21			
6				22			
7				23			
8				24			
9				25			
10				26			
11				27			
12				28			
13				29			
14				30			
15				31			
16							

9 No deviation occurred in this month.

9 Deviation/s occurred in this month.  
 Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_

Title/Position: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE BRANCH**

**FESOP Monthly Report**

Source Name: Rieth-Riley Construction Co., Inc.  
Source Address: Portable  
Mailing Address: P.O. Box 477, Goshen, Indiana 46527-0477  
FESOP No.: 097-15790-05166  
Facility: Cutback asphalt production  
Parameter: Amount of liquid binder used in the production of cutback asphalt (VOC)  
Limit: 2,124 tons of liquid binder used in the production of cutback asphalt per 365 consecutive day period, equivalent to VOC emissions less than 92.2 tons per year

Month:

Year:

Day	tons of liquid binder used (this day)	tons of liquid binder used (last 364 days)	tons of liquid binder used (365 day total)	Day	tons of liquid binder used (this day)	tons of liquid binder used (last 364 days)	tons of liquid binder used (365 day total)
1				17			
2				18			
3				19			
4				20			
5				21			
6				22			
7				23			
8				24			
9				25			
10				26			
11				27			
12				28			
13				29			
14				30			
15				31			
16							

9 No deviation occurred in this month.

9 Deviation/s occurred in this month.

Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_

Title / Position: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE DATA SECTION**

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)  
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT**

Source Name: Rieth-Riley Construction Co., Inc.  
Source Address: Portable  
Mailing Address: P.O. Box 477, Goshen, Indiana 46527-0477  
FESOP No.: 097-15790-05166

Months: \_\_\_\_\_ to \_\_\_\_\_ Year: \_\_\_\_\_

Page 1 of 2

This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. Deviations that are required to be reported by an applicable requirement shall be reported according to the schedule stated in the applicable requirement and do not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

9 NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.

9 THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD

**Permit Requirement** (specify permit condition #)

**Date of Deviation:**

**Duration of Deviation:**

**Number of Deviations:**

**Probable Cause of Deviation:**

**Response Steps Taken:**

**Permit Requirement** (specify permit condition #)

**Date of Deviation:**

**Duration of Deviation:**

**Number of Deviations:**

**Probable Cause of Deviation:**

**Response Steps Taken:**

Page 2 of 2

<b>Permit Requirement</b> (specify permit condition #)	
<b>Date of Deviation:</b>	<b>Duration of Deviation:</b>
<b>Number of Deviations:</b>	
<b>Probable Cause of Deviation:</b>	
<b>Response Steps Taken:</b>	
<b>Permit Requirement</b> (specify permit condition #)	
<b>Date of Deviation:</b>	<b>Duration of Deviation:</b>
<b>Number of Deviations:</b>	
<b>Probable Cause of Deviation:</b>	
<b>Response Steps Taken:</b>	
<b>Permit Requirement</b> (specify permit condition #)	
<b>Date of Deviation:</b>	<b>Duration of Deviation:</b>
<b>Number of Deviations:</b>	
<b>Probable Cause of Deviation:</b>	
<b>Response Steps Taken:</b>	

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.  
Deviation has been reported on: \_\_\_\_\_

Form Completed By: \_\_\_\_\_

Title/Position: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

Attach a signed certification to complete this report.

## **Indiana Department of Environmental Management Office of Air Quality**

### **Addendum to the Technical Support Document for Federally Enforceable State Operating Permit (FESOP) Renewal**

#### **Source Background and Description**

**Source Name:** Rieth - Riley Construction Co., Inc.  
**Source Location:** Portable (currently located at 1715 West Minnesota Street,  
Indianapolis, Marion County)  
**County:** Marion  
**SIC Code:** 2951  
**Operation Permit No.:** F 145-15790-05166  
**Permit Reviewer:** Craig J. Friederich

On June 7, 2003, the Office of Air Quality (OAQ) had a notice published in the Indianapolis Star & News, Indianapolis, Indiana, stating that Rieth - Riley Construction Co., Inc. had applied for a Federally Enforceable State Operating Permit (FESOP) Renewal to operate a portable hot mix drum asphalt manufacturing source with a baghouse for particulate control. The notice also stated that OAQ proposed to issue a permit for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

On June 30, 2003, Steven G. Adler, President of Belmont Terminals, submitted a comment on the proposed FESOP Renewal. The summary of the comment is as follows:

#### **Comment 1:**

Our company owns the adjacent properties located at 1905 Minnesota Street and 1777 South Belmont Avenue in Indianapolis. We are requesting that OAQ continue to send notices to this office regarding any future proceedings conducted related to this action.

#### **Response 1:**

The IDEM, OAQ appreciates your interest. Since a request has been made, and the source is located adjacent to Rieth-Riley Construction Co., Inc., the IDEM, OAQ will automatically send Mr. Steven G. Adler all decisions and notices on this matter. There are no changes to the permit as a result of this comment.

Indiana Department of Environmental Management  
Office of Air Quality

Technical Support Document (TSD)  
for a Federally Enforceable State Operating Permit (FESOP) Renewal

**Source Background and Description**

<b>Source Name:</b>	<b>Rieth - Riley Construction Co., Inc.</b>
<b>Source Location:</b>	<b>Portable (currently located at 1715 West Minnesota Street, Indianapolis, Marion County)</b>
<b>SIC Code:</b>	<b>2951</b>
<b>Operation Permit No.:</b>	<b>F 097-15790-05166</b>
<b>Permit Reviewer:</b>	<b>Craig J. Friederich</b>

The Office of Air Quality (OAQ) has reviewed a FESOP renewal application from Rieth - Riley Construction Co., Inc. relating to the operation of a portable hot mix drum asphalt manufacturing source. Rieth - Riley Construction Co., Inc. was issued FESOP 145-9355-05166, on March 31, 1998.

**Permitted Emission Units and Pollution Control Equipment**

The source consists of the following permitted emission units and pollution control devices:

- (a) One (1) hot mix drum mixer, constructed in 1998, equipped with a baghouse for particulate matter control, exhausting through stack SV-1, capacity: 400 tons per hour.
- (b) One (1) dryer burner, constructed in 1998, firing waste oil as a primary fuel and No. 2 distillate oil, No. 4 distillate oil, natural gas, butane gas, and propane as backup fuels, exhausting through stack SV-1, rated at 120 million British thermal units per hour.
- (c) One (1) hot oil heater, constructed in 1998, firing No. 2 fuel oil as a primary fuel with natural gas and propane gas as backup fuels, exhausting through stack SV-2, rated at 2.15 million British thermal units per hour.
- (d) Two (2) reciprocating internal combustion engines, constructed in 1998, firing No. 2 fuel oil, exhausting through stacks SV-7 and SV-8, rated at 545 and 50 kilowatts (5.473 and 0.505 million British thermal units per hour), respectively.
- (e) Two (2) liquid asphalt storage tanks, identified as Tank 1 and Tank 2, constructed in 1998, exhausting through stacks SV-3 and SV-4, capacity: 35,000 and 20,000 gallons, respectively.
- (f) One (1) waste oil storage tank for burner fuel, identified as Tank 3, constructed in 1998, exhausting through stack SV-5, capacity: 15,000 gallons.
- (g) One (1) fuel oil storage tank for hot oil heater fuel, constructed in 1998, exhausting through stack SV-6, capacity: 420 gallons.

- (h) Two (2) storage tanks for the No. 2 distillate oil internal combustion engine fuel, constructed in 1998, exhausting through stacks SV-9 and SV-10, capacity: 160 and 224 gallons, respectively.
- (i) Cold-mix cutback asphalt production.

### **Unpermitted Emission Units and Pollution Control Equipment**

There are no unpermitted facilities operating at this source during this review process.

### **New Emission Units and Pollution Control Equipment Receiving New Source Review Approval**

There are no new facilities proposed at this source during this review process.

### **Insignificant Activities**

The source also consists of the following insignificant activities, as defined in 326 IAC 2-7-1(21):

- (a) A gasoline fuel transfer and dispensing operation handling less than or equal to 1,300 gallons per day, such as filling of tanks, locomotives, automobiles, having a storage capacity less than or equal to 10,500 gallons.
- (b) A petroleum fuel, other than gasoline, dispensing facility, having a storage capacity of less than or equal to 10,500 gallons, and dispensing less than or equal to 230,000 gallons per month.
- (c) The following VOC and HAP storage containers: Vessels storing lubricating oil, hydraulic oils, machining oils, and machining fluids.

### **Existing Approvals**

The source has been operating under the following previous approvals including:

- (a) FESOP 145-9355-05166, on March 31, 1998, and
- (b) SPR 093-12640-05166, issued on November 28, 2000.

The following terms and conditions from previous approvals have been revised in this permit:

FESOP 145-9355-05166, on March 31, 1998.

- (a) Conditions D.1.1 and D.1.2 contained fuel usage limitations which limited SO<sub>2</sub> and NO<sub>x</sub> emissions from the dryer/burner. These fuel limits were updated using the latest AP-42 emission factors.
- (b) Condition D.1.3 contained an erroneous PM emission limit pursuant to 326 IAC 6-1-2. The limit has been changed from 13.2 pounds per hour to 12.58 pounds per hour.
- (c) Condition D.1.7 contained a VOC limit for cutback asphalt of 94.9 tons per year. Due to updates in the AP-42 emission factors for VOC from combustion, the emissions of VOC from cutback asphalt production must be limited to less than 92.2 tons per year. Therefore, the source is now limited to less than 2,124 tons of liquid binder per 365 consecutive day period.

SPR 093-12640-05166, issued on November 28, 2000.

- (d) Condition D.1.6 contained a production limit of 1,000,000 tons of asphalt concrete per twelve (12) consecutive month period, equivalent to PM<sub>10</sub> emissions of 78.2 tons per year based on a 0.1564 pounds of PM<sub>10</sub> per ton of asphalt produced emission factor. Due to updated emission factors, the limit shall be changed to a production limit of 1,000,000 tons of asphalt concrete per 365 consecutive day period, equivalent to PM<sub>10</sub> emissions of 59.5 tons per year based on a 0.119 pounds of PM<sub>10</sub> per ton of asphalt produced emission factor

The following terms and conditions from previous approvals have been determined to be no longer applicable, and, therefore, are not incorporated into this permit:

FESOP 145-9355-05166, on March 31, 1998.

- (e) Condition D.1.4 contained a pound per hour PM emission limit pursuant to 40 CFR 60.90 to 60.93, Subpart I and 326 IAC 6-3-2. Since this source is an asphalt concrete plant, which is portable, currently located in Marion County, and constructed after June 11, 1973, the facility is subject to the most stringent PM limit which is contained in 326 IAC 6-1-2(a).

#### Enforcement Issue

There are no enforcement actions pending.

#### Recommendation

The staff recommends to the Commissioner that the FESOP Renewal be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An administratively complete FESOP Renewal application for the purposes of this review was received on June 24, 2002.

There was no notice of completeness letter mailed to the source.

#### Emission Calculations

See pages 1 through 14 of 14 of Appendix A of this document for detailed emissions calculations.

#### Unrestricted Potential Emissions

This table reflects the unrestricted potential emissions of the source, excluding the emission limits that were contained in the previous FESOP.

Pollutant	Unrestricted Potential Emissions (tons/year)
PM	greater than 250
PM <sub>10</sub>	greater than 250

<b>Pollutant</b>	<b>Unrestricted Potential Emissions (tons/year)</b>
SO <sub>2</sub>	greater than 250
VOC	greater than 250
CO	less than 100
NO <sub>x</sub>	greater than 100, less than 250

Note: For the purpose of determining Title V applicability for particulates, PM<sub>10</sub>, not PM, is the regulated pollutant in consideration.

<b>HAPs</b>	<b>Unrestricted Potential Emissions (tons/year)</b>
TOTAL HAPs	10.2

\* HAPs include benzene, ethyl benzene, formaldehyde, methyl chloroform, naphthalene, toluene, xylene; arsenic, cadmium, chromium, manganese, mercury and nickel compounds. No single HAP exceeds a potential to emit of greater than ten (10) tons per year.

- (a) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of PM<sub>10</sub>, SO<sub>2</sub>, VOC, and NO<sub>x</sub> are equal to or greater than one hundred (100) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.
- (b) **Fugitive Emissions**  
Although this type of operation is not one of the twenty-eight (28) listed sources under 326 IAC 2-2, there are applicable New Source Performance Standards that were in effect on August 7, 1980. Therefore, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are counted toward determination of PSD and Emission Offset applicability.

#### **Potential to Emit After Issuance**

The source, issued a FESOP on March 31, 1998, has opted to remain a FESOP source, rather than apply for a Part 70 Operating Permit. The table below summarizes the potential to emit, reflecting all limits, of the emission units. Any control equipment is considered enforceable only after issuance of the Federally Enforceable State Operating Permit and only to the extent that the effect of the control equipment is made practically enforceable in the permit. Since the source has not constructed any new emission units, the source's potential to emit is based on the emission units included in the original FESOP (F 145-9355-05166; issued on March 31, 1998).

	<b>Potential to Emit After Issuance</b> (tons/year)						
Process/emission unit	PM	PM <sub>10</sub>	SO <sub>2</sub>	VOC	CO	NO <sub>x</sub>	HAPs
Drum dryer/burner (worst case)	55.1	less than 59.5	less than 95.1 *	3.75	44.2	less than 98.5 *	10.2
Two (2) reciprocating engines	2.36	2.06	*included in above limit	3.29	21.5	*included in above limit	--
Hot oil heater (worst case)	0.136	0.225	4.85	0.196	0.341	1.44	--
Conveying, handling	4.92	0.492	--	--	--	--	--
Unpaved Roads	164	34.4	--	--	--	--	--
Storage piles	0.846	0.296	--	--	--	--	--
Cutback asphalt	--	--	--	less than 92.2	--	--	--
Insignificant Activities	5.00	3.00	--	0.500	--	--	0.500
Total PTE After Issuance	232	less than 100	less than 100	less than 100	66.0	less than 100	Single less than 10 Total less than 25

- (a) The PM value for the Drum Mixer/Burner represents the allowable emissions pursuant to 326 IAC 6-1-2(a).
- (b) The allowable PM<sub>10</sub> emissions were computed by taking the full PTE of all facilities at the source, including unpaved roads and insignificant activities, and subtracting that value from one-hundred (100). This will ensure that the requirements of 326 IAC 2-7 (Part 70) are not applicable.

### County Attainment Status

The source is currently located in Marion County.

Pollutant	Status
PM <sub>10</sub>	Attainment
SO <sub>2</sub>	Attainment
NO <sub>2</sub>	Attainment
Ozone	Attainment

CO	Attainment
Lead	Attainment

- (a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Marion County has been designated as attainment or unclassifiable for ozone.

- (b) Fugitive Emissions

Although this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2, there are applicable New Source Performance Standards that were in effect on August 7, 1980. Therefore, the fugitive emissions are counted toward determination of PSD and Emission Offset applicability.

Since unpaved roads are not an affected facility of the applicable NSPS (40 CFR 60.90, Subpart I), fugitive PM emissions resulting from unpaved roads are not counted toward determination of PSD and Emission Offset applicability.

#### Portable Source

- (a) Location  
This is a portable source and its current location is currently located at 1715 West Minnesota Street, Indianapolis, Marion County.
- (b) PSD and Emission Offset Requirements  
The emissions for this portable source were reviewed under the requirements of the Prevention of Significant Deterioration (PSD), 326 IAC 2-2, 40 CFR 52.21, and Emission Offset, 326 IAC 2-3.

#### Federal Rule Applicability

- (a) This asphalt plant is still subject to the New Source Performance Standard, 326 IAC 12, (40 CFR Part 60.90, Subpart I), because it was constructed after June 11, 1973. No owner or operator subject to the provisions of Subpart I shall discharge into the atmosphere from any affected facility any gases which:
- (1) contain particulate matter in excess of 0.04 grains per dry standard cubic foot; or
  - (2) exhibit 20 percent opacity, or greater.
- Compliance with the requirements of 326 IAC 6-1 will ensure compliance with NSPS Subpart I.
- (b) The two (2) asphalt storage tanks, identified as Tank 1 and Tank 2, constructed in 1998, with capacities of 20,000 gallons and 35,000 gallons, respectively, as well as the one (1) waste oil storage tank, identified as Tank 3, installed in 1998, with a capacity of 15,000, are still subject to the New Source Performance Standard, 326 IAC 12, (40 CFR Part 60.110b, Subpart Kb) because the tanks have a capacity greater than forty (40) cubic meters, and were constructed after July 23, 1984. Since the materials stored in these tanks have a vapor pressure less than 15.0 kiloPascals, these tanks are only subject to 40 CFR Part 60.116b, paragraphs (a) and (b), which require record keeping.

- (c) The 420 gallon fuel oil storage tank and the two (2) storage tanks for generator fuel with capacities of 160 and 224 gallons, respectively, are not subject to the requirements of NSPS Subpart Kb since their individual capacities are less than 40 cubic meters.
- (d) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14, 326 IAC 20, 40 CFR Part 61 and 40 CFR Part 63) applicable to this source.

#### **State Rule Applicability - Entire Source**

##### **326 IAC 2-2 (Prevention of Significant Deterioration (PSD))**

Although this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2, there are applicable New Source Performance Standards that were in effect on August 7, 1980. Therefore, the fugitive emissions are counted toward determination of PSD and Emission Offset applicability.

Since unpaved roads are not an affected facility of the applicable NSPS (40 CFR 60.90, Subpart I), fugitive PM emissions resulting from unpaved roads are not counted toward determination of PSD and Emission Offset applicability.

This source was constructed after August 7, 1977. The limited potential to emit of VOC, PM, PM<sub>10</sub>, and SO<sub>2</sub> from the entire source, excluding fugitive PM emissions from unpaved roads, are each less than one hundred (100) tons per year. PM emissions are limited by the requirements of 326 IAC 6-1. PM<sub>10</sub> and SO<sub>2</sub> are limited to less than one-hundred (100) tons per year pursuant to 326 IAC 2-8-4. Therefore, the requirements of 326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset) are not applicable, and this source is a minor source with respect to these rules.

##### **326 IAC 2-4.1-1 (New Source Toxics Control)**

The total potential to emit each individual hazardous air pollutant (HAP) from the entire source is less than ten (10) tons per year and the potential to emit total HAPs is less than a total of twenty-five (25) tons per year, therefore, the requirements of 326 IAC 2-4.1-1 are not applicable.

##### **326 IAC 2-6 (Emission Reporting)**

This portable source is subject to 326 IAC 2-6 (Emission Reporting) because it is a portable asphalt plant that can re-locate to one of the counties specified in 326 IAC 2-6-1. Pursuant to this rule, the owner/operator of the source must submit an emission statement for the source. The statement must be received in accordance with the compliance schedule specified in 326 IAC 2-6 and contain the minimum requirement as specified in 326 IAC 2-6-4. The submittal should cover the period defined in 326 IAC 2-6-2(8).

##### **326 IAC 2-8-4 (FESOP)**

Pursuant to this rule, the amount of PM<sub>10</sub>, SO<sub>2</sub>, VOC, and NO<sub>x</sub> shall be limited to less than one hundred (100) tons per year.

- (a) In order to limit the potential to emit PM<sub>10</sub> from the entire source to less than one hundred (100) tons per year, the PM<sub>10</sub> emissions from the drum mixer (including the burner) will be limited to 59.5 tons per year. This limit, plus the full potential to emit from all other facilities at the source, including insignificant activities, will ensure that the potential to emit PM<sub>10</sub> from the entire source will be less than one-hundred (100) tons per year. The source has requested a production limit of 1,000,000 tons of asphalt produced per year. This

production limit, combined with an emission factor not to exceed 0.119 pounds of PM<sub>10</sub> per ton of asphalt produced, is equivalent to 59.5 tons of PM<sub>10</sub> per year.

- (b) The total amount of waste oil fuel burned at the dryer/burner shall be limited to less than 1,777,570 gallons per 365 consecutive day period, which is equivalent to an SO<sub>2</sub> limit of less than 95.1 tons per twelve (12) consecutive month period (see page 13 of 14 of Appendix A). The SO<sub>2</sub> emissions from the two (2) engines have been accounted for in the limit by equivalency by the number of hours of operation. The applicant has stated that keeping track of the number of hours of operation of the engines is preferable to keeping track of amount of the No. 2 distillate oil fired by the engines.

The full SO<sub>2</sub> potential emission rate of 4.85 tons per year from the hot oil heater has been assumed in computing the limits

For purposes of determining compliance based on SO<sub>2</sub> emissions, each gallon of No.2 distillate oil shall be equivalent to 0.6636 gallons of waste oil, each gallon of No.4 distillate oil shall be equivalent to 0.7010 gallons of waste oil, each gallon of butane and propane shall be equivalent to 0.000187 gallons of waste oil, and each million cubic feet of natural gas shall be equivalent to 5.607 gallons of waste oil. Each hour of operation of the 0.505 million British thermal units per hour engine shall be equivalent to 1.369 gallons of waste oil and each hour of operation of the 5.473 million British thermal units per hour engine shall be equivalent to 25.8 gallons of waste oil.

- (c) Similarly, the total amount of natural gas burned at the dryer/burner shall be limited to 1036.8 million cubic feet per 365 consecutive day period which is equivalent to an NO<sub>x</sub> limit of 98.5 tons per year (see page 11 of 14 in Appendix A). The NO<sub>x</sub> emissions from the two (2) engines have been accounted for in the limit by equivalency by the number of hours of operation and CO, VOC, PM and PM<sub>10</sub> have had the full potential emissions listed for the engines.

The full NO<sub>x</sub> potential emission rate of 1.44 tons per year from the hot oil heater has been assumed in computing the limits.

For purposes of determining compliance based on NO<sub>x</sub> emissions every 1,000 gallons of butane shall be equivalent to 0.1105 million cubic feet of natural gas, every 1,000 gallons of propane shall be equivalent to 0.100 million cubic feet of natural gas, every 1,000 gallons of waste oil shall be equivalent to 0.0842 million cubic feet of natural gas, every 1,000 gallons of No. 2 distillate oil shall be equivalent to 0.1263 million cubic feet of natural gas, every 1,000 gallons of No. 4 distillate oil shall be equivalent to 0.1263 million cubic feet of natural gas and each hour of operation of the 0.505 million British thermal units per hour engine shall be equivalent to 0.0117 million cubic feet of natural gas and each hour of operation of the 5.473 million British thermal units per hour engine shall be equivalent to 0.0893 million cubic feet of natural gas.

- (d) The liquid binder usage shall be limited for the production of cold mix cutback asphalt to less than 2,124 tons per year which is equivalent to VOC emissions of 92.2 tons per year based on 7.0 percent diluent present in the asphalt.

#### 326 IAC 5-1 (Opacity Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of thirty percent (30%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

326 IAC 6-4 (Fugitive Dust Emissions Limitations)

This rule requires that the source not generate fugitive dust to the extent that some portion of the material escapes beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located.

326 IAC 6-5 (Fugitive Particulate Emissions Limitations)

This is a portable asphalt plant with the potential to emit PM from fugitive emissions greater than twenty-five (25) tons per year. Therefore, this source is subject to the requirements of 326 IAC 6-5. This rule requires a fugitive dust plan to be submitted. The plan was submitted on January 8, 1998, was reviewed, and approved and consists of the following:

- (a) unpaved roads shall be controlled by one or more of the following:
  - (1) treating with water on an as-needed basis.
  - (2) paving with asphalt.
  - (3) treating with emulsified asphalt on an as-needed basis.
  - (4) double chip and seal the road surface on an as-needed basis.
- (b) dust from storage piles shall be controlled by one or more of the following measures:
  - (1) treating the stockpile area with water on an as-needed basis.
  - (2) treating the stockpiles with water on an as-needed basis.
  - (3) maintain minimum size and number of aggregate storage piles.
  - (4) treating stockpiles with emulsified asphalt on an as needed basis.
- (c) dust from outdoor conveying of aggregates shall be controlled by applying water at the feed and intermediate points on an as needed basis.
- (d) dust from the transferring of aggregates shall be controlled by one or more of the following measures:
  - (1) minimize the vehicular distance between transfer points and enclose transfer points.
  - (2) apply water to transfer points on an as-needed basis.
  - (3) enclose the transfer points.

- (e) dust from the transportation of aggregate by truck, front end loader, etc., shall be controlled by one or more of the following measures:
  - (1) tarping aggregate hauling vehicles.
  - (2) maintain 10 mile per hour speed limits.
  - (3) maintain vehicle bodies in a condition that prevents leakage.
  - (4) spray aggregates with water.
- (f) dust from the loading and unloading of aggregates shall be controlled by one or more of the following measures:
  - (1) reduce free fall distance to a minimum.
  - (2) reduce the rate of discharge.
  - (3) spray water on aggregates on an as-needed basis.

326 IAC 7-1.1-2 (Sulfur Dioxide Emission Limitations)

The one (1) dryer burner, rated at 120 million British thermal units per hour, is subject to the requirements of 326 IAC 7-1.1, since the potential to emit SO<sub>2</sub> is greater than twenty-five (25) tons per year. This rule requires levels of sulfur dioxide emissions from the combustion of No.2 distillate and No.4 distillate fuel oils not to exceed 0.5 pounds per million British thermal units of heat input (the equivalent of 0.5% sulfur content at a higher heating value of 0.138 million British thermal units per gallon and a maximum heat input rate of 120 million British thermal units per hour).

This rule also requires levels of sulfur dioxide emissions from the combustion of residual waste oil not to exceed 1.6 pounds per million British thermal units of heat input (the equivalent of 1.062% sulfur content at a higher heating value of 0.142 million British thermal units per gallon and a maximum heat input rate of 120 million British thermal units per hour). The source has requested a voluntary limit of 1.0% sulfur content.

326 IAC 7-2-1 (Sulfur Dioxide Compliance: reporting and methods to determine compliance)

Reports of calendar month or annual average sulfur content, heat content, fuel consumption, and sulfur dioxide emission rate shall be provided upon request to the Office of Air Quality.

326 IAC 8-5-2 (Miscellaneous operations: asphalt paving)

The requirements of 326 IAC 8-5-2 are applicable to any asphalt paving application located anywhere in the state. No person shall cause or allow the use of cutback asphalt or asphalt emulsion containing more than seven percent (7%) oil distillate by volume of emulsion for any paving application except the following purposes:

- (a) penetrating prime coating
- (b) stockpile storage
- (c) application during the months of November, December, January, February and March.

### **State Rule Applicability - Individual Facilities**

#### **326 IAC 6-1-2 (Particulate Matter; Non-attainment Area Limitations)**

This is a portable asphalt plant with the potential to emit PM of greater than one-hundred (100) tons per year. Therefore, the requirements of 326 IAC 6-1-2 (Particulate Matter; Non-attainment Area Limitations) are applicable. Pursuant to 326 IAC 6-1-2, since this plant was constructed after June 11, 1973, the particulate matter emissions from this portable asphalt plant shall not exceed 0.03 grains per dry standard cubic foot, equivalent to 12.58 pounds per hour at a flow rate of 70,000 actual cubic feet per minute and a temperature of 260 degrees Fahrenheit. Compliance with this limit will ensure compliance with the 0.04 grains per dry standard cubic foot limit prescribed by NSPS Subpart I.

### **Testing Requirements**

Pursuant to SPR 093-12640-05166, PM and PM<sub>10</sub> testing was to be performed between sixty (60) and one-hundred eighty (180) days after issuance of the permit. These stack tests were never conducted. Therefore, PM and PM<sub>10</sub> testing is to be performed on the drum mixer and dryer/burner stack exhaust SV1 within one-hundred eighty (180) days after issuance of this permit in order to assure compliance with 326 IAC 2-2, 326 IAC 2-8-4, 326 IAC 6-1, and NSPS Subpart I as shown in Appendix A.

### **Compliance Requirements**

Permits issued under 326 IAC 2-8 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-8-4. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

All compliance requirements from previous approvals were incorporated into this FESOP. The compliance monitoring requirements applicable to this source are as follows:

The one (1) drum mixer has applicable compliance monitoring conditions as specified below:

- (a) Visible emissions notations of the baghouse, conveyors, and material transfer points shall be performed once per shift during normal daylight operations. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained

employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Compliance Response Plan for this unit shall contain troubleshooting contingency and corrective actions for when an abnormal emission is observed.

- (b) The Permittee shall record the total static pressure drop across the baghouse used in conjunction with the one (1) drum mixer, at least once per shift when the drying/mixing process is in operation when venting to the atmosphere. When for any one reading, the pressure drop across the baghouse is outside the normal range of 1.0 and 9.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Preparation, Implementation, Records, and Reports.
- (c) An inspection shall be performed within the last month of each calendar quarter of all bags controlling the one (1) drum mixer. All defective bags shall be replaced.
- (d) In the event that bag failure has been observed:
  - (A) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if there are no visible emissions or if the event qualifies as an emergency and the Permittee satisfies the emergency provisions of this proposed permit (Section B- Emergency Provisions). Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.
  - (B) For single compartment baghouses, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this proposed permit (Section B - Emergency Provisions).

These monitoring conditions are necessary because the baghouse for the one (1) drum mixer must operate properly to ensure compliance with 326 IAC 5-1 (Opacity), 326 IAC 6-1 (Nonattainment Area Particulate Limitations), 326 IAC 2-8 (FESOP) and NSPS Subpart I.

## Conclusion

The operation of this portable hot mix drum asphalt manufacturing source shall be subject to the conditions of the attached proposed FESOP Renewal No.: F 097-15790-05166.

## Appendix A: Emission Calculations

**Company Name:** Rieth-Riley Construction Co., Inc.  
**Plant Location:** Portable  
**County:** Portable  
**FESOP:** F 097-15790  
**Plt. ID:** 097-05166  
**Date:** June 24, 2002  
**Permit Reviewer:** Craig J. Friederich

### I. Potential Emissions

#### A. Source emissions before controls

<div>Hot Oil Heater on Oil (oil/&lt;100MMBTU/uncontrolled)</div> <div>The following calculations determine the amount of emissions created by #2 &amp; #1 distillate fuel oil @ 0.5 % sulfur, based on 8760 hours of use and AP-42, Tables 1.3-1, 1.3-2, 1.3-3</div> <div><div>Pollutant: 2.150 MMBtu/hr * 8760 hrs/yr 138000.0 Btu/gal * 2000 lbs/ton</div><div><div><div>P M: 2.0 lbs/1000 gal = PM-10: 3.3 lbs/1000 gal = S O x: 71.0 lbs/1000 gal = N O x: 20.0 lbs/1000 gal = V O C: 0.34 lbs/1000 gal = C O: 5.0 lbs/1000 gal =</div><div><div>0.136 tons/yr 0.225 tons/yr 4.845 tons/yr 1.365 tons/yr 0.023 tons/yr 0.341 tons/yr</div></div></div></div></div>	<div>Hot Oil Heater (butane)</div> <div>The following calculations determine the amount of emissions created by butane gas @ 0.20 grains sulfur per 100 cubic feet, based on 8760 hours of use and AP-42 Ch. 1.5, Table 1.5-1</div> <div><div><div>0.000 MMBtu/hr * 8760 hrs/yr 102600.0 Btu/gal * 2000 lbs/ton</div><div><div><div>P M: 0.5 lbs/1000 gal = PM-10: 0.5 lbs/1000 gal = S O x: 0.02 lbs/1000 gal = N O x: 15.0 lbs/1000 gal = V O C: 0.60 lbs/1000 gal = C O: 2.1 lbs/1000 gal =</div><div><div>0.000 tons/yr 0.000 tons/yr 0.000 tons/yr 0.000 tons/yr 0.000 tons/yr 0.000 tons/yr</div></div></div></div></div></div>
<div>Hot Oil Heater on Gas (gas/&lt;100MMBTU/uncontrolled)</div> <div>The following calculations determine the amount of emissions created by natural gas combustion, based on 8760 hours of use, AP-42 Ch. 1.4, Tables 1.4-1, 1.4-2, 1.4-3</div> <div><div><div>Pollutant: 2.150 MMBtu/hr * 8760 hrs/yr 1000 Btu/cf * 2000 lbs/ton</div><div><div><div>P M: 1.9 lbs/MMcf = P M-10: 7.6 lbs/MMcf = S O x: 0.6 lbs/MMcf = N O x: 100.0 lbs/MMcf = V O C: 5.5 lbs/MMcf = C O: 84.0 lbs/MMcf =</div><div><div>0.018 tons/yr 0.072 tons/yr 0.006 tons/yr 0.942 tons/yr 0.052 tons/yr 0.791 tons/yr</div></div></div></div></div></div>	<div>Hot Oil Heater (propane)</div> <div>The following calculations determine the amount of emissions created by propane gas @ 0.20 grains sulfur per 100 cubic feet, based on 8760 hours of use and AP-42 Ch. 1.5, Table 1.5-1</div> <div><div><div>2.150 MMBtu/hr * 8760 hrs/yr 91500.0 Btu/gal * 2000 lbs/ton</div><div><div><div>P M: 0.4 lbs/1000 gal = PM-10: 0.4 lbs/1000 gal = S O x: 0.02 lbs/1000 gal = N O x: 14.0 lbs/1000 gal = V O C: 1.90 lbs/1000 gal = C O: 3.2 lbs/1000 gal =</div><div><div>0.041 tons/yr 0.041 tons/yr 0.002 tons/yr 1.441 tons/yr 0.196 tons/yr 0.329 tons/yr</div></div></div></div></div></div>

**Dryer Burner (gas/<100MMBTU/uncontrolled)**

The following calculations determine the amount of emissions created by natural gas combustion, based on 8760 hours of use, AP-42 Ch. 1.4, Tables 1.4-1, 1.4-2, 1.4-3

Pollutant:	<b>0.000</b> MMBtu/hr * 8760 hrs/yr 1000 Btu/cf * 2000 lbs/ton	* Ef (lbs/MMcf) = (tons/yr)
P M:	1.9 lbs/MMcf =	<b>0.0000</b> tons/yr
P M-10:	7.6 lbs/MMcf =	<b>0.000</b> tons/yr
S O x:	0.6 lbs/MMcf =	<b>0.000</b> tons/yr
N O x:	100.0 lbs/MMcf =	<b>0.0000</b> tons/yr
V O C:	5.5 lbs/MMcf =	<b>0.000</b> tons/yr
C O:	84.0 lbs/MMcf =	<b>0.000</b> tons/yr

**Dryer Burner (gas/>100MMBTU/uncontrolled)**

The following calculations determine the amount of emissions created by natural gas combustion, based on 8760 hours of use, AP-42 Ch. 1.4, Tables 1.4-1, 1.4-2, 1.4-3

Pollutant:	<b>120.000</b> MMBtu/hr * 8760 hrs/yr 1000 Btu/cf * 2000 lbs/ton	* Ef (lbs/MMcf) = (tons/yr)
P M:	1.9 lbs/MMcf =	<b>0.999</b> tons/yr
P M-10:	7.6 lbs/MMcf =	<b>3.995</b> tons/yr
S O x:	0.6 lbs/MMcf =	<b>0.315</b> tons/yr
N O x:	190.0 lbs/MMcf =	<b>99.86</b> tons/yr
V O C:	5.5 lbs/MMcf =	<b>2.891</b> tons/yr
C O:	84.0 lbs/MMcf =	<b>44.150</b> tons/yr

Post-NSPS = 190

**Dryer Burner (gas/>100MMBTU/low nox)**

The following calculations determine the amount of emissions created by natural gas combustion, based on 8760 hours of use, AP-42 Ch. 1.4, Tables 1.4-1, 1.4-2, 1.4-3 (low NOx burner = 140, flue gas recirculation = 100)

Pollutant:	<b>0.000</b> MMBtu/hr * 8760 hrs/yr 1000 Btu/cf * 2000 lbs/ton	* Ef (lbs/MMcf) = (tons/yr)
P M:	1.9 lbs/MMcf =	<b>0.000</b> tons/yr
P M-10:	7.6 lbs/MMcf =	<b>0.000</b> tons/yr
S O x:	0.6 lbs/MMcf =	<b>0.000</b> tons/yr
N O x:	140.0 lbs/MMcf =	<b>0.000</b> tons/yr
V O C:	5.5 lbs/MMcf =	<b>0.000</b> tons/yr
C O:	84.0 lb/MMcf =	<b>0.000</b> tons/yr

**Dryer Burner (#2 oil)**

>100 MMBtu/hr

The following calculations determine the amount of emissions created by #2 & #1 distillate fuel oil @ **0.5** % sulfur, based on 8760 hours of use and AP-42, Tables 1.3-1, 1.3-2, 1.3-3

Pollutant:	<b>120.0</b> MMBtu/hr * 8760 hrs/yr <b>138000.0</b> Btu/gal * 2000 lbs/ton	* Ef (lbs/1000 gal) = (tons/yr)
P M:	2.0 lbs/1000 gal =	<b>7.617</b> tons/yr
PM-10:	3.3 lbs/1000 gal =	<b>12.569</b> tons/yr
S O x:	71.0 lbs/1000 gal =	<b>270.417</b> tons/yr
N O x:	24.0 lbs/1000 gal =	<b>91.409</b> tons/yr
V O C:	0.20 lbs/1000 gal =	<b>0.762</b> tons/yr
C O:	5.0 lbs/1000 gal =	<b>19.043</b> tons/yr

If Rating >100 mmBtu

N O x: **24.0**  
V O C: **0.20**

**Dryer Burner (#4 oil/ <100MMBTU)**

The following calculations determine the amount of emissions created by #4 distillate  
fuel oil @ 0.5 % sulfur, based on 8760 hours of use and AP-42, Tables 1.3-1, 1.3-2, 1.3-3

Pollutant:	<u>0.000</u> MMBtu/hr * 8760 hrs/yr	* Ef (lbs/1000 gal) = (tons/yr)
	<u>138000.0</u> Btu/gal * 2000 lbs/ton	
P M:	2.0 lbs/1000 gal =	<u>0.000</u> tons/yr
PM-10:	3.3 lbs/1000 gal =	<u>0.000</u> tons/yr
S O x:	71.0 lbs/1000 gal =	<u>0.000</u> tons/yr
N O x:	20.0 lbs/1000 gal =	<u>0.000</u> tons/yr
V O C:	0.34 lbs/1000 gal =	<u>0.000</u> tons/yr
C O:	5.0 lbs/1000 gal =	<u>0.000</u> tons/yr

**Dryer Burner (#4 oil/ >100MMBTU)**

The following calculations determine the amount of emissions created by #4 distillate  
fuel oil @ 0.500 % sulfur, based on 8760 hours of use and AP-42, Tables 1.3-1, 1.3-2, 1.3-3

Pollutant:	<u>120.0</u> MMBtu/hr * 8760 hrs/yr	* Ef (lbs/1000 gal) = (tons/yr)
	<u>138000.0</u> Btu/gal * 2000 lbs/ton	
P M:	2.0 lbs/1000 gal =	<u>7.617</u> tons/yr
PM-10:	3.3 lbs/1000 gal =	<u>12.569</u> tons/yr
S O x:	75.0 lbs/1000 gal =	<u>285.652</u> tons/yr
N O x:	24.0 lbs/1000 gal =	<u>91.409</u> tons/yr
V O C:	0.20 lbs/1000 gal =	<u>0.762</u> tons/yr
C O:	5.0 lbs/1000 gal =	<u>19.043</u> tons/yr

**Dryer Burner (waste oil/ vaporizing burner)**

The following calculations determine the amount of emissions created by waste  
fuel oil @ 0.500 % sulfur, based on 8760 hours of use and AP-42, Chapter 1.11

	<u>0.000</u>	% Ash
	<u>0.000</u>	% Lead

Pollutant:	<u>0.0</u> MMBtu/hr * 8760 hrs/yr	* Ef (lbs/1000 gal) = (tons/yr)
	<u>0.0</u> Btu/gal * 2000 lbs/ton	
P M:	0.0 lbs/1000 gal =	<u>0.000</u> tons/yr
P M-10:	0.0 lbs/1000 gal =	<u>0.000</u> tons/yr
S O x:	50.0 lbs/1000 gal =	<u>0.000</u> tons/yr
N O x:	11.0 lbs/1000 gal =	<u>0.000</u> tons/yr
VOC	1.0 lbs/1000 gal =	<u>0.000</u> tons/yr
C O:	1.7 lbs/1000 gal =	<u>0.000</u> tons/yr
Pb:	0.0 lbs/1000 gal =	<u>0.000</u> tons/yr

**Dryer Burner (waste oil/atomizing burner)**

The following calculations determine the amount of emissions created by waste  
fuel oil @ 1.000 % sulfur, based on 8760 hours of use and AP-42 Chapter 1.11

1.000  
0.010

% Ash  
% Lead

Pollutant:	<u>120.000</u> MMBtu/hr * 8760 hrs/yr	* Ef (lbs/1000 gal) = (tons/yr)
	<u>142000.000</u> Btu/gal * 2000 lbs/ton	
P M:	66.0 lbs/1000 gal =	<u>244.293</u> tons/yr
P M-10:	57.0 lbs/1000 gal =	<u>210.980</u> tons/yr
S O x:	107.0 lbs/1000 gal =	<u>396.051</u> tons/yr
N O x:	16.0 lbs/1000 gal =	<u>59.223</u> tons/yr
VOC:	1.0 lbs/1000 gal =	<u>3.701</u> tons/yr
C O:	2.10 lbs/1000 gal =	<u>7.773</u> tons/yr
Pb:	0.50 lbs/1000 gal =	<u>1.851</u> tons/yr

**Dryer Burner (butane)**

The following calculations determine the amount of emissions created by butane  
gas @ 0.20 grains sulfur per 100 cubic feet, based on 8760 hours of use and AP-42, Table 1.5-1

Pollutant:	<u>120.000</u> MMBtu/hr * 8760 hrs/yr	* Ef (lbs/1000 gal) = (tons/yr)
	<u>102600.0</u> Btu/gal * 2000 lbs/ton	
P M:	0.6 lbs/1000 gal =	<u>3.074</u> tons/yr
PM-10:	0.6 lbs/1000 gal =	<u>3.074</u> tons/yr
S O x:	0.02 lbs/1000 gal =	<u>0.092</u> tons/yr
N O x:	21.0 lbs/1000 gal =	<u>107.579</u> tons/yr
V O C:	0.26 lbs/1000 gal =	<u>1.332</u> tons/yr
C O:	3.6 lbs/1000 gal =	<u>18.442</u> tons/yr

**Dryer Burner (propane)**

The following calculations determine the amount of emissions created by propane  
gas @ 0.20 grains sulfur per 100 cubic feet, based on 8760 hours of use and AP-42, Table 1.5-1

Pollutant:	<u>120.000</u> MMBtu/hr * 8760 hrs/yr	* Ef (lbs/1000 gal) = (tons/yr)
	<u>91500.0</u> Btu/gal * 2000 lbs/ton	
P M:	0.6 lbs/1000 gal =	<u>3.447</u> tons/yr
PM-10:	0.6 lbs/1000 gal =	<u>3.447</u> tons/yr
S O x:	0.02 lbs/1000 gal =	<u>0.115</u> tons/yr
N O x:	19.0 lbs/1000 gal =	<u>109.141</u> tons/yr
V O C:	0.25 lbs/1000 gal =	<u>1.436</u> tons/yr
C O:	3.2 lbs/1000 gal =	<u>18.382</u> tons/yr

**\*\* aggregate drying: drum-mix plant \*\***

The following calculations determine the amount of emissions created by aggregate drying, based on 8760 hours of use and AP-42, Chapter 11.1, Table 11.1-3, rev. 12/00

P M:	28 lbs/ton x	<u>400.0</u>	tons/hr x	8760 hrs/yr =	<u>49056.000</u> tons/yr
		2000	lbs/ton		
P M-10:	6.5 lbs/ton x	<u>400</u>	tons/hr x	8760 hrs/yr =	<u>11388.000</u> tons/yr
		2000	lbs/ton		
Lead:	3.30E-06 lbs/ton x	<u>400</u>	tons/hr x	8760 hrs/yr =	<u>0.006</u> tons/yr
		2000	lbs/ton		
HAPs:	0.0076 lbs/ton x	<u>400</u>	tons/hr x	8760 hrs/yr =	<u>13.315</u> tons/yr
		2000	lbs/ton		

HAPs include benzene, ethylbenzene, formaldehyde, methyl chloroform, naphthalene, toluene, xylene; arsenic, cadmium, chromium, manganese, mercury, and nickel compounds.

**\*\* aggregate drying: batch-mix plant \*\***

The following calculations determine the amount of emissions created by aggregate drying, based on 8760 hours of use and EPA SCC #3-05-002-05:

P M:	32 lbs/ton x	<u>0.0</u>	tons/hr x	8760 hrs/yr =	<u>0.0</u> tons/yr
		2000	lbs/ton		
P M-10:	4.5 lbs/ton x	<u>0</u>	tons/hr x	8760 hrs/yr =	<u>0.0</u> tons/yr
		2000	lbs/ton		
Lead:	3.30E-06 lbs/ton x	<u>0</u>	tons/hr x	8760 hrs/yr =	<u>0.000</u> tons/yr
		2000	lbs/ton		
HAPs:	0.0076 lbs/ton x	<u>0</u>	tons/hr x	8760 hrs/yr =	<u>0.000</u> tons/yr
		2000	lbs/ton		

HAPs include benzene, ethylbenzene, formaldehyde, methyl chloroform, naphthalene, toluene, xylene; arsenic, cadmium, chromium, manganese, mercury, and nickel compounds.

**\*\* conveying / handling \*\***

The following calculations determine the amount of emissions created by material handling of aggregate, based on 8760 hours of use and AP-42, Ch 11.19.2

$$E_f = .0032^* \frac{(U/5)^{1.3} * k}{(M/2)^{1.4}} = \underline{\underline{0.003}} \text{ lbs/ton}$$

where k= 1 (particle size multiplier)  
U = 12 mph mean wind speed (worst case)  
M = 4.7 % moisture

P M :	<u>0.003</u> lbs/ton x	<u>372.00</u> tons/hr x	8760 hrs/yr =	<u>4.920</u> tons/yr	
		2000 lbs/ton			
P M-10:	10% of PM =			<u>0.492</u> tons/yr	
<b>Screening</b>	PM: <u>0.00</u> tons/hr x	0.0315 lbs/ton	/ 2000 lbs/ton x	8760 hrs/yr =	<u>0.000</u> tons/yr
	P M-10: 10% of PM =			<u>0.000</u> tons/yr	AP-42 Ch.11.19.2

**\*\* unpaved roads \*\***

The following calculations determine the amount of emissions created by vehicle traffic on unpaved roads, based on 8760 hours of use and AP-42, Ch 11.2.1.

**A. Euclid Off Road Truck**

11.80 trips/hr x					
0.250 miles/roundtrip x					
8760 hrs/yr =			25842.0 miles per year		
<b>For PM</b>		<b>For PM-10</b>			
	$E_f = \{k \cdot [(s/12)^{0.8}] \cdot [(W/3)^b] / [(M_{dry}/0.2)^c] \cdot [(365-p)/365]$				
11.24	= 2.55 lb/mile				
10	where k = 2.6 (particle size multiplier for PM-10) (k=10 for PM-30 or TSP)				
4.8	s = 4.8 mean % silt content of unpaved roads				
0.5	b = 0.4 Constant for PM-10 (b = 0.5 for PM-30 or TSP)				
0.4	c = 0.3 Constant for PM-10 (c = 0.4 for PM-30 or TSP)				
21	W = 51 tons average vehicle weight				
0.2	Mdry = 0.2 surface material moisture content, % (default is 0.2 for dry conditions)				
125	p = 125 number of days with at least 0.254mm of precipitation (See Figure 13.2.2-1)				
	11.24 lb/mi x	25842 mi/yr =	PM	145.23 tons/yr	
		2000 lb/ton			
	2.55 lb/mi x	25842 mi/yr =	PM-10	32.96 tons/yr	
		2000 lb/ton			

**Front-End Loader**

46.70 trips/hr x					
0.080 miles/roundtrip x					
8760 hrs/yr =			32727.4 miles per year		
<b>For PM</b>		<b>For PM-10</b>			
	$E_f = \{k \cdot [(s/12)^{0.8}] \cdot [(W/3)^b] / [(M_{dry}/0.2)^c] \cdot [(365-p)/365]$				
11.24	= 2.19 lb/mile				
10	where k = 2.6 (particle size multiplier for PM-10) (k=10 for PM-30 or TSP)				
4.8	s = 4.8 mean % silt content of unpaved roads				
0.5	b = 0.4 Constant for PM-10 (b = 0.5 for PM-30 or TSP)				
0.4	c = 0.3 Constant for PM-10 (c = 0.4 for PM-30 or TSP)				
28	W = 35 tons average vehicle weight				
0.2	Mdry = 0.2 surface material moisture content, % (default is 0.2 for dry conditions)				
125	p = 125 number of days with at least 0.254mm of precipitation (See Figure 13.2.2-1)				
	11.24 lb/mi x	32727.36 mi/yr =	PM	183.93 tons/yr	
		2000 lb/ton			
	2.19 lb/mi x	32727.36 mi/yr =	PM-10	35.83 tons/yr	
		2000 lb/ton			

**C. Semi Truck**

0.0 trips/hr x					
0.212 miles/roundtrip x					
8760 hrs/yr =			0.0 miles per year		
<b>For PM</b>		<b>For PM-10</b>			
	$E_f = \{k \cdot [(s/12)^{0.8}] \cdot [(W/3)^b] / [(M_{dry}/0.2)^c] \cdot [(365-p)/365]$				
9.21	= 1.93 lb/mile				
10	where k = 2.6 (particle size multiplier for PM-10) (k=10 for PM-30 or TSP)				
4.8	s = 4.8 mean % silt content of unpaved roads				
0.5	b = 0.4 Constant for PM-10 (b = 0.5 for PM-30 or TSP)				
0.4	c = 0.3 Constant for PM-10 (c = 0.4 for PM-30 or TSP)				
25.5	W = 25.5 tons average vehicle weight				
0.2	Mdry = 0.2 surface material moisture content, % (default is 0.2 for dry conditions)				
125	p = 125 number of days with at least 0.254mm of precipitation (See Figure 13.2.2-1)				

	9.21 lb/mi x	0 mi/yr =	PM	0.00 tons/yr
	2000 lb/ton			
	1.93 lb/mi x	0 mi/yr =	PM-10	0.00 tons/yr
	2000 lb/ton			
All Trucking	Total PM:	329.16 tons/yr		
	Total PM-10:	68.79 tons/yr		

**\*\* storage \*\***

The following calculations determine the amount of emissions created by wind erosion of storage stockpiles, based on 8760 hours of use and AP-42, Ch 11.2.3.

E <sub>f</sub> = 1.7*(s/1.5)*(365-p)/235*(f/15)			
=	1.74 lbs/acre/day for sand		
=	1.16 lbs/acre/day for stone		
=	1.16 lbs/acre/day for slag		
=	1.16 lbs/acre/day for gravel		
=	1.16 lbs/acre/day for RAP		
where s =	1.5 % silt for sand		
s =	1.0 % silt of stone		
s =	1.0 % silt of slag		
s =	1.0 % silt of gravel		
s =	1.0 % silt for RAP		
p =	125 days of rain greater than or equal to 0.01 inches		
f =	15 % of wind greater than or equal to 12 mph		
E <sub>p</sub> (storage) = E <sub>f</sub> * sc * (20 cuft/ton) * (365 days/yr)			
	(2000 lbs/ton)*(43560 sqft/acre)*(25 ft)		
=	0.076 tons/yr for sand		
=	0.194 tons/yr for stone		
=	0.000 tons/yr for slag		
=	0.097 tons/yr for gravel		
=	0.132 tons/yr for RAP		
Total PM:	0.499 tons/yr		
where sc = 13 ,000 tons storage capacity for sand			
sc =	50 ,000 tons storage capacity for stone		
sc =	0 ,000 tons storage capacity for slag		
sc =	25 ,000 tons storage capacity for gravel		
sc =	34 ,000 tons storage capacity for RAP		
P M-10:	35% of PM =	0.026 tons/yr for sand	
	35% of PM =	0.068 tons/yr for stone	
	35% of PM =	0.000 tons/yr for slag	
	35% of PM =	0.034 tons/yr for gravel	
	35% of PM =	0.046 tons/yr for RAP	
Total PM-10:		0.174 tons/yr	

Emissions before controls (combustion plus production) are as follows:

natural gas		#2 oil		#4 oil		waste oil	
P M:	<b>49392</b> tons/yr	P M:	<b>49398</b> tons/yr	P M:	<b>49398</b> tons/yr	P M:	<b>49635</b> tons/yr
P M-10:	<b>11462</b> tons/yr	P M-10:	<b>11470</b> tons/yr	P M-10:	<b>11470</b> tons/yr	P M-10:	<b>11668</b> tons/yr
S O x:	<b>5.16</b> tons/yr	S O x:	<b>275.26</b> tons/yr	S O x:	<b>290.50</b> tons/yr	S O x:	<b>400.90</b> tons/yr
N O x:	<b>101.30</b> tons/yr	N O x:	<b>92.85</b> tons/yr	N O x:	<b>92.85</b> tons/yr	N O x:	<b>60.66</b> tons/yr
V O C:	<b>3.09</b> tons/yr	V O C:	<b>0.957</b> tons/yr	V O C:	<b>0.957</b> tons/yr	V O C:	<b>3.90</b> tons/yr
C O:	<b>44.94</b> tons/yr	C O:	<b>19.83</b> tons/yr	C O:	<b>19.83</b> tons/yr	C O:	<b>8.56</b> tons/yr
Lead:	<b>0.006</b> tons/yr	Lead:	<b>0.006</b> tons/yr	Lead:	<b>0.006</b> tons/yr	Lead:	<b>1.856</b> tons/yr
HAPs:	<b>13.32</b> tons/yr	HAPs:	<b>13.32</b> tons/yr	HAPs:	<b>13.315</b> tons/yr	HAPs:	<b>13.315</b> tons/yr

  

butane		propane	
P M:	<b>49394</b> tons/yr	P M:	<b>49394</b> tons/yr
P M-10:	<b>11461</b> tons/yr	P M-10:	<b>11461</b> tons/yr
S O x:	<b>4.94</b> tons/yr	S O x:	<b>4.96</b> tons/yr
N O x:	<b>109.02</b> tons/yr	N O x:	<b>110.58</b> tons/yr
V O C:	<b>1.53</b> tons/yr	V O C:	<b>1.63</b> tons/yr
C O:	<b>19.23</b> tons/yr	C O:	<b>19.17</b> tons/yr
Lead:	<b>0.006</b> tons/yr	Lead:	<b>0.006</b> tons/yr
HAPs:	<b>13.32</b> tons/yr	HAPs:	<b>13.32</b> tons/yr

B. Source emissions after controls

**dryer combustion: gas**

P M:	1.00 tons/yr x	<b>0.00100</b> emitted after controls =	<b>0.001</b> tons/yr
P M-10:	3.99 tons/yr x	<b>0.00100</b> emitted after controls =	<b>0.004</b> tons/yr

**dryer combustion: #2 oil**

P M:	7.62 tons/yr x	<b>0.00100</b> emitted after controls =	<b>0.008</b> tons/yr
P M-10:	12.57 tons/yr x	<b>0.00100</b> emitted after controls =	<b>0.013</b> tons/yr

**hot oil heater combustion: gas**

P M:	0.018 tons/yr x	<b>1.00000</b> emitted after controls =	<b>0.018</b> tons/yr
P M-10:	0.072 tons/yr x	<b>1.00000</b> emitted after controls =	<b>0.072</b> tons/yr

**hot oil heater combustion: #2 oil**

P M:	0.136 tons/yr x	<b>1.00000</b> emitted after controls =	<b>0.136</b> tons/yr
P M-10:	0.225 tons/yr x	<b>1.00000</b> emitted after controls =	<b>0.225</b> tons/yr

**hot oil heater combustion: butane**

P M:	0.000 tons/yr x	<b>1.00000</b> emitted after controls =	<b>0.000</b> tons/yr
P M-10:	0.000 tons/yr x	<b>1.00000</b> emitted after controls =	<b>0.000</b> tons/yr

**hot oil heater combustion: propane**

P M:	0.041 tons/yr x	<b>1.00000</b> emitted after controls =	<b>0.041</b> tons/yr
P M-10:	0.041 tons/yr x	<b>1.00000</b> emitted after controls =	<b>0.041</b> tons/yr

**dryer combustion: #4 oil**

P M:	7.62 tons/yr x	<b>0.00100</b> emitted after controls =	<b>0.008</b> tons/yr
P M-10:	12.57 tons/yr x	<b>0.00100</b> emitted after controls =	<b>0.013</b> tons/yr

**dryer combustion: waste oil**

P M:	244.29 tons/yr x	<b>0.00100</b> emitted after controls =	<b>0.244</b> tons/yr
P M-10:	210.98 tons/yr x	<b>0.00100</b> emitted after controls =	<b>0.211</b> tons/yr

**dryer combustion: butane**

P M:	3.07 tons/yr x	<b>0.00100</b> emitted after controls =	<b>0.003</b> tons/yr
P M-10:	3.07 tons/yr x	<b>0.00100</b> emitted after controls =	<b>0.003</b> tons/yr

**dryer combustion: propane**

P M:	3.45 tons/yr x	<u>0.00100</u> emitted after controls =	<u>0.003</u> tons/yr
P M-10:	3.45 tons/yr x	<u>0.00100</u> emitted after controls =	<u>0.003</u> tons/yr

**aggregate drying:**

P M:	49056.00 tons/yr x	<u>0.00100</u> emitted after controls =	<u>49.056</u> tons/yr
P M-10:	11388.00 tons/yr x	<u>0.00100</u> emitted after controls =	<u>11.388</u> tons/yr

**conveying/handling:**

P M:	4.92 tons/yr x	<u>1.000</u> emitted after controls =	<u>4.920</u> tons/yr
P M-10:	0.49 tons/yr x	<u>1.000</u> emitted after controls =	<u>0.492</u> tons/yr

**screening**

P M:	0.00 tons/yr x	<u>1.000</u> emitted after controls =	<u>0.000</u> tons/yr
P M-10:	0.00 tons/yr x	<u>1.000</u> emitted after controls =	<u>0.000</u> tons/yr

**unpaved roads:**

P M:	329.16 tons/yr x	50.00% emitted after controls =	<u>164.580</u> tons/yr
P M-10:	68.79 tons/yr x	50.00% emitted after controls =	<u>34.394</u> tons/yr

**storage:**

P M:	0.499 tons/yr x	50.00% emitted after controls =	<u>0.249</u> tons/yr
P M-10:	0.174 tons/yr x	50.00% emitted after controls =	<u>0.087</u> tons/yr

Emissions after controls (combustion plus production) are as follows:

	Butane	Propane	Gas	#2 Oil	#4 Oil	Waste Oil	
P M:	<b>218.94</b>	<b>218.94</b>	<b>218.94</b>	<b>218.95</b>	<b>218.95</b>	<b>219.19</b>	tons/yr
P M-10:	<b>46.59</b>	<b>46.59</b>	<b>46.59</b>	<b>46.60</b>	<b>46.60</b>	<b>46.80</b>	tons/yr

## II. Allowable Emissions

A. The following calculations determine compliance with 326 IAC 6-1-2(a), which limits stack emissions from this plant to 0.03 gr/dscf:

$$\frac{0.03 \text{ grains}^*}{\text{dscf}} \times \frac{70000.000 \text{ acfm}^*}{525600 \frac{\text{minutes}^*}{\text{year}}} \times \frac{1}{7000 \text{ grains}} \times \frac{1 \text{ ton}}{2000 \text{ lbs}} = \frac{55.099 \text{ tons/yr}}{49.44 \text{ tons/yr}}$$

To meet 326 IAC 6-1-2(a), the following value must be less than the amount calculated above:

B. The following calculations determine the maximum sulfur content of distillate #2 fuel oil allowable by 326 IAC 7:

limit: 0.5 lbs/MMBtu

$$\frac{0.5 \text{ lbs/MMBtu} \times 138000.0 \text{ Btu/gal} = 69.0 \text{ lbs/1000gal}}{69 \text{ lbs/1000gal} / 142.0 \text{ lb/1000 gal} = 0.486}$$

Sulfur content must be less than or equal to 0.486 % to comply with 326 IAC 7  
and to limit SO2 emissions to 99 tons per year or less.

C. The following calculations determine the maximum sulfur content of residual waste fuel oil allowable by 326-IAC 7:

limit: 1.6 lbs/MMBtu

$$\frac{1.6 \text{ lbs/MMBtu} \times 142000.000 \text{ Btu/gal} = 227.2 \text{ lbs/1000gal}}{227.2 \text{ lbs/1000gal} / 214.0 \text{ lbs/1000 gal} = 1.062}$$

(check burner type)  
Sulfur content must be less than or equal to 1.062 % to comply with 326 IAC 7  
and to limit SO2 emissions to 99 tons per year or less.

D. The following calculations determine the maximum sulfur content of distillate #4 fuel oil allowable by 326-IAC 7:

limit: 0.5 lbs/MMBtu

$$\frac{0.5 \text{ lbs/MMBtu} \times 138000.000 \text{ Btu/gal} = 69 \text{ lbs/1000gal}}{69 \text{ lbs/1000gal} / 150.0 \text{ lbs/1000 gal} = 0.460}$$

Sulfur content must be less than or equal to 0.460 % to comply with 326 IAC 7  
and to limit SO2 emissions to 99 tons per year or less.

### III. Limited Potential Emissions

#### FUEL USAGE LIMITATION: BASED ON NO<sub>x</sub>

##### FUEL USAGE LIMITATION FOR BURNER (Gas)

$$\begin{array}{rclclcl} 104.03 \frac{\text{tons NO}_x}{\text{year}} & * & 2000 \frac{\text{lbs}}{\text{ton}} & = & 208060 \frac{\text{lbs NO}_x}{\text{year}} \\ 208060 \frac{\text{lbs NO}_x}{\text{year}} & / & 190.0 \frac{\text{lbs NO}_x}{\text{MMcf}} & = & 1095.05 \frac{\text{MMcf}}{\text{year}} \\ 1095.05 \frac{\text{MMcf}}{\text{year}} & * & \frac{98.5 \text{ tons/yr}}{104.03 \text{ tons/yr}} & = & 1036.8 \frac{\text{MMcf}}{\text{year}} \text{ FESOP Limit} \end{array}$$

##### FUEL USAGE LIMITATION FOR BURNER (#2 Oil)

$$\begin{array}{rclclcl} 95.22 \frac{\text{tons NO}_x}{\text{year}} & * & 2000 \frac{\text{lbs}}{\text{ton}} & = & 190434.00 \frac{\text{lbs NO}_x}{\text{year}} \\ 190434.00 \frac{\text{lbs NO}_x}{\text{year}} & / & 24 \frac{\text{lbs}}{1000 \text{ gal}} & = & 7934.75 \frac{\text{kgal}}{\text{year}} \\ 7934.75 \frac{\text{kgal}}{\text{year}} & * & \frac{98.5 \text{ tons/yr}}{95.22 \text{ tons/yr}} & = & 0.0 \frac{\text{kgal}}{\text{year}} \text{ FESOP Limit} \end{array}$$

##### FUEL USAGE LIMITATION FOR BURNER (#4 Oil)

$$\begin{array}{rclclcl} 95.22 \frac{\text{tons NO}_x}{\text{year}} & * & 2000 \frac{\text{lbs}}{\text{ton}} & = & 190434.00 \frac{\text{lbs NO}_x}{\text{year}} \\ 190434.00 \frac{\text{lbs NO}_x}{\text{year}} & / & 24.0 \frac{\text{lbs}}{1000 \text{ gal}} & = & 7934.75 \frac{\text{kgal}}{\text{year}} \\ 7934.75 \frac{\text{kgal}}{\text{year}} & * & \frac{98.5 \text{ tons/yr}}{95.22 \text{ tons/yr}} & = & 0.0 \frac{\text{kgal}}{\text{year}} \text{ FESOP Limit} \end{array}$$

##### FUEL USAGE LIMITATION FOR BURNER (Waste Oil)

$$\begin{array}{rclclcl} 61.69 \frac{\text{tons NO}_x}{\text{year}} & * & 2000 \frac{\text{lbs}}{\text{ton}} & = & 123380.00 \frac{\text{lbs NO}_x}{\text{year}} \\ 123380.00 \frac{\text{lbs NO}_x}{\text{year}} & / & 16.0 \frac{\text{lbs}}{1000 \text{ gal}} & = & 7711.25 \frac{\text{kgal}}{\text{year}} \\ 7711.25 \frac{\text{kgal}}{\text{year}} & * & \frac{98.5 \text{ tons/yr}}{61.69 \text{ tons/yr}} & = & 0.0 \frac{\text{kgal}}{\text{year}} \text{ FESOP Limit} \end{array}$$

#### FUEL USAGE LIMITATION FOR BURNER (Propane)

$$\begin{array}{rclclcl}
 109.14 \frac{\text{tons NOx}}{\text{year}} & * & 2000 \frac{\text{lbs}}{\text{ton}} & = & 218281.97 \frac{\text{lbs NOx}}{\text{year}} \\
 218281.97 \frac{\text{lbs NOx}}{\text{year}} & / & 19.0 \frac{\text{lbs}}{1000 \text{ gal}} & = & 11488.52 \frac{\text{kgal}}{\text{year}} \\
 11488.52 \frac{\text{kgal}}{\text{year}} & * & \frac{98.0 \text{ tons/yr}}{109.14 \text{ tons/yr}} & = & 10315.8 \frac{\text{kgal}}{\text{year}} \text{ FESOP Limit}
 \end{array}$$

#### FUEL USAGE LIMITATION FOR BURNER (Butane)

$$\begin{array}{rclclcl}
 107.00 \frac{\text{tons NOx}}{\text{year}} & * & 2000 \frac{\text{lbs}}{\text{ton}} & = & 214000.00 \frac{\text{lbs NOx}}{\text{year}} \\
 214000.00 \frac{\text{lbs NOx}}{\text{year}} & / & 21.0 \frac{\text{lbs}}{1000 \text{ gal}} & = & 10190.48 \frac{\text{kgal}}{\text{year}} \\
 10190.48 \frac{\text{kgal}}{\text{year}} & * & \frac{98.5 \text{ tons/yr}}{107.00 \text{ tons/yr}} & = & 9381.0 \frac{\text{kgal}}{\text{year}} \text{ FESOP Limit}
 \end{array}$$

#### FUEL USAGE LIMITATION: BASED ON SO2

##### FUEL USAGE LIMITATION FOR BURNER (Gas)

$$\begin{array}{rclclcl}
 0.329 \frac{\text{tons SO2}}{\text{year}} & * & 2000 \frac{\text{lbs}}{\text{ton}} & = & 658.00 \frac{\text{lbs SO2}}{\text{year}} \\
 658.00 \frac{\text{lbs SO2}}{\text{year}} & / & 0.6 \frac{\text{lbs SO2}}{\text{MMcf}} & = & 1096.67 \frac{\text{MMcf}}{\text{year}} \\
 1096.67 \frac{\text{MMcf}}{\text{year}} & * & \frac{95.1 \text{ tons/yr}}{0.33 \text{ tons/yr}} & = & 0.0 \frac{\text{MMcf}}{\text{year}} \text{ FESOP Limit}
 \end{array}$$

##### FUEL USAGE LIMITATION FOR BURNER (#2 Oil)

$$\begin{array}{rclclcl}
 281.7 \frac{\text{tons SO2}}{\text{year}} & * & 2000 \frac{\text{lbs}}{\text{ton}} & = & 563370.00 \frac{\text{lbs SO2}}{\text{year}} \\
 563370.00 \frac{\text{lbs SO2}}{\text{year}} & / & 71.0 \frac{\text{lbs}}{1000 \text{ gal}} & = & 7934788.7324 \frac{\text{gal}}{\text{year}} \\
 7934788.73 \frac{\text{gal}}{\text{year}} & * & \frac{95.1 \text{ tons/yr}}{281.69 \text{ tons/yr}} & = & 2678873.2 \frac{\text{gal}}{\text{year}} \text{ FESOP Limit}
 \end{array}$$

#### FUEL USAGE LIMITATION FOR BURNER (#4 Oil)

$$\begin{array}{rclclcl}
 \frac{297.6 \text{ tons SO}_2}{\text{year}} & * & \frac{2000 \text{ lbs}}{\text{ton}} & = & \frac{595108 \text{ lbs SO}_2}{\text{year}} \\
 \\ 
 \frac{595108.00 \text{ lbs SO}_2}{\text{year}} & / & \frac{75.0 \text{ lbs}}{1000 \text{ gal}} & = & \frac{7934773.3333 \text{ gal}}{\text{year}} \\
 \\ 
 \frac{7934773.33 \text{ gal}}{\text{year}} & * & \frac{95.1 \text{ tons/yr}}{297.55 \text{ tons/yr}} & = & \frac{2536000.0 \text{ gal}}{\text{year}} \text{ FESOP Limit}
 \end{array}$$

#### FUEL USAGE LIMITATION FOR BURNER (Waste Oil)

$$\begin{array}{rclclcl}
 \frac{412.6 \text{ tons SO}_2}{\text{year}} & * & \frac{2000 \text{ lbs}}{\text{ton}} & = & \frac{825106.00 \text{ lbs SO}_2}{\text{year}} \\
 \\ 
 \frac{825106.00 \text{ lbs SO}_2}{\text{year}} & / & \frac{107.0 \text{ lbs}}{1000 \text{ gal}} & = & \frac{7711271.03 \text{ gal}}{\text{year}} \\
 \\ 
 \frac{7711271.03 \text{ gal}}{\text{year}} & * & \frac{95.1 \text{ tons/yr}}{412.55 \text{ tons/yr}} & = & \frac{1777570.1 \text{ gal}}{\text{year}} \text{ FESOP Limit}
 \end{array}$$

#### FUEL USAGE LIMITATION FOR BURNER (Propane)

$$\begin{array}{rclclcl}
 \frac{0.12 \text{ tons SO}_2}{\text{year}} & * & \frac{2000 \text{ lbs}}{\text{ton}} & = & \frac{230.00 \text{ lbs SO}_2}{\text{year}} \\
 \\ 
 \frac{230.00 \text{ lbs SO}_2}{\text{year}} & / & \frac{0.02 \text{ lbs}}{1000 \text{ gal}} & = & \frac{11500000.00 \text{ gal}}{\text{year}} \\
 \\ 
 \frac{11500000.00 \text{ gal}}{\text{year}} & * & \frac{95.1 \text{ tons/yr}}{0.12 \text{ tons/yr}} & = & \frac{0.00 \text{ gal}}{\text{year}} \text{ FESOP Limit}
 \end{array}$$

#### FUEL USAGE LIMITATION FOR BURNER (Butane)

$$\begin{array}{rclclcl}
 \frac{0.096 \text{ tons SO}_2}{\text{year}} & * & \frac{2000 \text{ lbs}}{\text{ton}} & = & \frac{192.00 \text{ lbs SO}_2}{\text{year}} \\
 \\ 
 \frac{192.00 \text{ lbs SO}_2}{\text{year}} & / & \frac{0.02 \text{ lbs}}{1000 \text{ gal}} & = & \frac{10666666.67 \text{ gal}}{\text{year}} \\
 \\ 
 \frac{10666666.67 \text{ gal}}{\text{year}} & * & \frac{95.1 \text{ tons/yr}}{0.096 \text{ tons/yr}} & = & \frac{0.0 \text{ gal}}{\text{year}} \text{ FESOP Limit}
 \end{array}$$

#### \*\* Reciprocating Internal Combustion Engines \*\*

The following calculations determine the amount of emissions created by #2 distillate fuel oil based on 8760 hours of use, AP-42 Ch. 3.3 and EPA SCC #2-03-001-01:

138,000 Btu/gal

Pollutant:	0.505	$\frac{\text{MMBtu/hr} * 8760 \text{ hr/yr}}{2000 \text{ lbs/ton}}$	* Ef (lbs/MMBtu) = (tons/yr)
P M:	0.31	lbs/MMBtu =	<b>0.686</b> tons/yr
P M-10:	0.31	lbs/MMBtu =	<b>0.686</b> tons/yr

S O x:	0.29 lbs/MMBtu =	<b>0.641</b> tons/yr
N O x:	4.41 lbs/MMBtu =	<b>9.75</b> tons/yr
V O C:	0.40 lbs/MMBtu =	<b>0.885</b> tons/yr
C O:	0.95 lbs/MMBtu =	<b>2.10</b> tons/yr

Pollutant:	5.473	$\frac{\text{MMBtu/hr} \times 8760 \text{ hr/yr}}{2000 \text{ lbs/ton}}$	* Ef (lbs/MMBtu) = (tons/yr)
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P M:	0.0697 lbs/MMBtu =	<b>1.67</b> tons/yr
P M-10:	0.0573 lbs/MMBtu =	<b>1.37</b> tons/yr
S O x:	0.505 lbs/MMBtu =	<b>12.1</b> tons/yr
N O x:	3.10 lbs/MMBtu =	<b>74.3</b> tons/yr
V O C:	0.10 lbs/MMBtu =	<b>2.40</b> tons/yr
C O:	0.81 lbs/MMBtu =	<b>19.4</b> tons/yr

Assume rapid cure and 95% evaporative loss of diluent.	Percent diluent in liquid binder =	7%	Average Density of Asphalt Cement =	9.18 lbs/gal
	Average Density Diluent =	5.84 lbs/gal		

The FESOP VOC emission limit of 99.0 tons per year minus the worst case sum of emissions from combustion and production = **92.20 tons/yr**

Limited tons of liquid binder = (limited VOC emission rate/95%)/density of diluent \* 2,000 lbs/ton \*(density of diluent + ((1 - %diluent)/%diluent) \* density of asphalt cement) / 2000 lbs/ton)

**LIQUID BINDER USAGE LIMITATION = 2124 tons/yr**